American Indian & Alaska Native Data Project
of the
Centers for Medicare and Medicaid Services
Tribal Technical Advisory Group

MEDICARE
ENROLLMENT, HEALTH STATUS, SERVICE USE AND PAYMENT DATA FOR AMERICAN INDIANS & ALASKA NATIVES

February 2014

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Funded by:

The project was funded by a contract from the National Indian Health Board which received funding from the Tribal Affairs Group of the Centers for Medicare and Medicaid Services.

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EXECUTIVE SUMMARY

Project Background

The Centers for Medicare and Medicaid Services (CMS) Tribal Technical Advisory Group was established in 2004 to provide advice and input to CMS on policy and program issues affecting the delivery of health services by CMS-funded programs to American Indians and Alaska Natives (AIAN). CMS programs include Medicare, Medicaid, and Child Health Insurance Plans as well as implementation of healthcare reform legislation overseen by the CMS Center for Consumer Information and Insurance Oversight. In addition, the Tribal Technical Advisory Group provides information to CMS to facilitate its efforts to better serve AIAN and support AIAN healthcare providers, specifically those in the Indian Health Service (IHS) system. Providers include IHS providers, Tribal health programs funded through contracts and compacts with IHS, and urban Indian health centers. These providers are known collectively as I/T/U providers.

One of the five goals of the Tribal Technical Advisory Group's AIAN Strategic Plan 2010 to 2015[1] is to enhance CMS data so that it may be used to evaluate and improve the capacity of CMS to serve AIAN. To meet this goal, the CMS Tribal Technical Advisory Group AIAN Data Project (AIAN Data Project) has conducted analyses of AIAN Medicaid and Medicare enrollment, health service utilization and payments, including CMS reimbursement data for I/T/U providers, using CMS data.

The goal of this *Medicare Enrollment, Health Status, Service Use and Payment Data for American Indians and Alaska Natives* report is to provide updated and expanded information on AIAN Medicare enrollment and information on demographic characteristics, health status, service utilization, and payments for AIAN Medicare enrollees. This is the first report to include data on Medicare Part D (prescribed medications) coverage of AIAN, and the health status of Medicare covered AIAN. The report includes utilization and payment results for a broad array of inpatient and outpatient services; previous AIAN Data Project Medicare reports included information for only short-stay hospital services. In addition, data for a reference population comprised of non-Hispanic white Medicare enrollees living in the same counties as AIAN Medicare enrollees are included for nearly all analyses.

As part of the AIAN Data Project, this report was written to:

1. Establish baseline indicators for AIAN Medicare enrollment, health status, service use, and payments for AIAN Medicare beneficiaries using CMS 2010 data;
2. Describe the health status, service use, and payments for AIAN with diabetes; and
3. Identify issues that influence health outcomes and the delivery of care for AIAN Medicare enrollees and merit additional study.

Overview of Methods

The data were extracted from the 2010 Medicare Beneficiary Summary File. The project population includes persons who had at least one month of Medicare coverage during 2010. AIAN in the data file were divided into two AIAN categories, based on linkages of Medicare beneficiary files with the IHS National Data Warehouse, to identify AIAN who had ever registered to use I/T/U services. Those registered to use I/T/U services are referred to as IHS AIAN; other AIAN are referred to as self-reported AIAN. Both AIAN and non-Hispanic white Medicare enrollees were assigned to one of two geographic areas. Using county and zip code data, those living in IHS Contract Health Service Delivery Area counties were assigned to one of 12 IHS Areas. Enrollees not assigned to an IHS Area were placed in the geographic category "non-IHS Areas."

As this is the first AIAN Data Project report to be written using the *Medicare Beneficiary Summary File*, it provides an overview of IHS AIAN Medicare enrollment, healthcare coverage, utilization, and payments, as well as the health status of IHS AIAN Medicare enrollees in the file. These general findings are descriptive analyses and do not include statistical adjustments for differences between the groups of enrollees (such as adjustments for differences in age and health status). For each issue, detailed statistical analyses may be

provided in future issue briefs on specific topics (such as inpatient hospital utilization and long-term care services) to more fully understand the results and factors that influence service utilization and payments.

Throughout the report we include information on a reference population—non-Hispanic white Medicare enrollees—to provide some context for the AIAN findings. This report is meant to be an overview of information for IHS AIAN Medicare enrollees; it is not intended to be a report specifically on health disparities. Differences in health status, service utilization, and payments between the AIAN and non-Hispanic white populations cannot be fully understood without a more detailed understanding of how eligibility, age, Medicaid enrollment, geographic location, and other factors contribute to those differences. Such understanding may be obtained through statistical analyses and presented in future issue briefs.

Key Findings for 2010

We highlight a number of key findings and recommendations for future study and analysis.

1. **Nearly 30% of IHS AIAN enrollees had Medicare coverage due to disability or end-stage renal disease (ESRD), double the percentage among non-Hispanic white enrollees.**
    - Additional data analyses could be conducted to improve understanding of the prevalence of chronic conditions among and health service utilization of AIAN enrollees who are Disabled or have ESRD.

2. **Twice as many IHS AIAN Medicare enrollees (21.6%) as non-Hispanic white enrollees (9.9%) were dually enrolled in Medicaid.**
    - Additional analyses of Medicaid and Medicare data for dually enrolled IHS AIAN could provide more specific information on their chronic conditions and healthcare utilization. For example, analysis of the prevalence of chronic conditions among and healthcare use of the dually enrolled with Medicaid long-term care coverage could also reveal opportunities to better integrate the delivery of services.

3. **The prevalence of diabetes among IHS AIAN was 1.6 times as high as that for non-Hispanic white enrollees, despite the fact that IHS AIAN were younger.** The prevalence was 38.9% among IHS AIAN and 23.8% for non-Hispanic white enrollees.
    - Additional analyses could inform efforts to prevent the onset of complications among those with diabetes. For example, more detailed data may be analyzed to understand use of primary, specialty, and educational services that may improve health status and limit preventable use of hospital inpatient services among those with diabetes.

4. **IHS AIAN utilization rates for hospital emergency department and inpatient services were 1.4 times as high as utilization by non-Hispanic white enrollees.** IHS AIAN spent, on average, 2.4 days in the hospital and averaged 0.6 emergency department visits during 2010. Non-Hispanic white enrollees averaged 1.8 days in the hospital and 0.4 emergency department visits during the year.
    - Analyses of detailed data for hospital admissions could improve understanding of factors associated with health service use during and after a hospital stay, and the extent to which hospital admissions and readmissions could be prevented with access to and use of outpatient services.

5. **Nearly 40% of IHS AIAN with continuous fee-for-service coverage (that is continuous Part A and Part B coverage) also had 12 months of Part D coverage.** However, Medicare cost-sharing for Part B and Part D covered services, or lack of Part B and D coverage, may create barriers to obtaining Part B and D covered services for enrollees with limited incomes and no other forms of healthcare coverage (such as Medicaid and private supplemental coverage). At the same time, some tribes are purchasing Medicare and other types of coverage for their members.
    - Detailed analyses of prevalence of chronic conditions and service utilization could provide tribes information that may inform decisions related to purchasing healthcare coverage.

6. **As with other populations, a small number of IHS AIAN Medicare enrollees were identified as having very high total payments or service use.** For the purposes of this report, we identified high cost/use patients as persons for whom total payments were in the top 1% of IHS AIAN payments in their eligibility category, or who had high use of specific types of inpatient or outpatient services. In comparison to non-Hispanic white high cost/use patients, IHS AIAN high cost/use patients were younger, had a higher rate of Medicaid coverage, and had a higher prevalence of diabetes and cardiovascular disease.
    - Analyses could be conducted to more fully understand the needs of high cost/use patients and identify opportunities to see that timely and appropriate services are available to meet their needs. For example, analyses of home health service utilization data could provide information that may be used to improve the availability and use of such services.

7. **The average Total payment for IHS AIAN in all eligibility categories was $15,021 per person, approximately 1.2 times higher than that for non-Hispanic white enrollees ($12,261).** Some factors that may contribute to the observed payment differences include: 1) more IHS AIAN were Disabled or had ESRD, and average payment for persons in these eligibility categories were higher than average payment for Aged enrollees; 2) the prevalence of diabetes was higher among IHS AIAN; and 3) IHS AIAN had higher utilization of hospital inpatient, emergency department, and hospital outpatient services—services that account for a high percentage of total payments. Furthermore, other IHS AIAN characteristics, such as lower socioeconomic status,[2,3] rural residence, and reduced access to healthcare providers, influence health service costs and may contribute to the observed differences. These and other factors need to be considered when interpreting the payment findings; it is not possible to comment on their influence on payments without detailed statistical analyses.

This report provides the most detailed description to date of healthcare coverage, health status, service utilization, and payments for AIAN enrolled in Medicare. The *Medicare Beneficiary Summary File* is limited in that it provides summary data, and there is no detail on the I/T/U services used or payments for such service use. Despite these limitations, the findings provide useful information to the CMS Tribal Technical Advisory Group in its work to advise CMS on Medicare policy and program issues affecting AIAN. The results provide baseline rates for a number of healthcare and health status indicators and how they compare to rates of others living in the same counties. The report demonstrates that Medicare data can be used to monitor trends in these indicators over time as policies and programs change. Finally, the information will guide the development of future Tribal Technical Advisory Group Data Project analyses to improve understanding of many of the general findings presented in this report.

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Appendices are available upon request. Please contact Joan O'Connell at joan.oconnell@ucdenver.edu.

I. INTRODUCTION

The Centers for Medicare and Medicaid Services (CMS) Tribal Technical Advisory Group was established in 2004 to provide advice and input to CMS on policy and program issues affecting delivery of health services by CMS-funded programs to American Indians and Alaska Natives (AIAN). CMS programs include Medicare, Medicaid, and state Child Health Insurance Plans as well as those overseen by the Center for Consumer Information and Insurance Oversight concerning implementation of the healthcare reform legislation related to private health insurance.[4] In addition, the Tribal Technical Advisory Group provides information to CMS to facilitate its efforts to better serve AIAN and support AIAN healthcare providers, specifically those in the Indian Health Service (IHS) system. Providers include IHS providers, Tribal health programs funded through contracts and compacts with IHS, and urban Indian health centers. These providers are known collectively as I/T/U providers.

One of the five goals of the Tribal Technical Advisory Group's AIAN Strategic Plan 2010 to 2015 is to enhance CMS data so that it may be used to evaluate and improve the capacity of CMS to serve AIAN.[1] To meet this goal, the CMS Tribal Technical Advisory Group AIAN Data Project (AIAN Data Project) has conducted analyses of AIAN program enrollment, health status, service utilization, and payment data, including CMS reimbursement data for I/T/U providers.

In 2009 and 2012, the TTAG Data Project produced its first reports on Medicare; these reports were the first Medicare reports to provide detailed information on AIAN Medicare enrollees.[5,6] They described enrollment by eligibility category and age, and provided findings concerning acute short-stay hospital utilization and payments. Furthermore, the reports provided information for AIAN who were eligible for IHS services (such as services provided by I/T providers). Due to data limitations, these reports only included findings for acute short-stay hospitals. Data on utilization and payments for other services, health coverage, and health status were not available. Nor were data available for a reference population of Medicare enrollees living in the same counties as the AI/AN. With this report, we overcame these previous limitations.

The goal of this *Medicare Enrollment, Health Status, Service Use, and Payment Data for American Indians and Alaska Natives* report is to provide updated and expanded information on AIAN Medicare enrollment, demographic characteristics, health status, service utilization, and payments. This report includes, for the first time, findings on AIAN Medicare Part D (prescribed medications) coverage, and the health status of Medicare covered AIAN. The report includes utilization and payment results for a broad array of inpatient and outpatient services; previous AIAN Data Project Medicare reports included information for just short-stay hospital services. In addition, data for a reference population comprised of non-Hispanic white Medicare enrollees living in the same counties as AIAN Medicare enrollees are included for nearly all analyses.

As part of the AIAN Data Project, this report was written to:

1. Establish baseline indicators for AIAN Medicare enrollment, health status, service use, and payments for AIAN Medicare beneficiaries using CMS 2010 data;
2. Describe the health status, service use, and payments for AIAN with diabetes; and
3. Identify issues that influence health outcomes and the delivery of care for AIAN Medicare enrollees and merit additional study.

II. METHODS

1. Data Sources

The primary source of information for this report was the *2010 Medicare Beneficiary Summary File* from the CMS Chronic Condition Warehouse. As part of the Medicare Modernization Act of 2003, CMS created the Chronic Condition Warehouse to improve the quality of care and reduce the cost of care for chronically ill Medicare beneficiaries.[7] The *2010 Medicare Beneficiary Summary File* consists of individual records for Medicare enrollees that include three different types of data for each individual: 1) demographic and healthcare coverage, 2) over 25 chronic condition indicators, and 3) summary health service utilization and payment data.

CMS also provided selected data from the *Medicare Master Enrollment Data Base* for the 2010 beneficiaries. The enrollment data were used to identify AIAN who had ever registered to use I/T/U services. CMS and IHS work together to link Medicare enrollment information with information from the IHS National Data Warehouse to identify these AIAN; they are referred to as IHS AIAN in this report. It is important to note that AIAN who were registered to use I/T/U services may not have used I/T/U services during 2010.

2. Population

The project population includes people who had at least one month of Medicare coverage during 2010 and lived in the United States.[a]

2.1. Identification of AIAN and the Reference Population

Race-ethnicity data from the *Medicare Beneficiary Summary File* and the indicator in the *Medicare Master Enrollment Data Base* that identified who was an IHS AIAN were used to identify two populations of AIAN as well as a reference population of non-Hispanic whites. The *Medicare Beneficiary Summary File* includes information on the race-ethnicity of Medicare enrollees and was used to identify persons identified to Medicare as AIAN and non-Hispanic white. However, AIAN were most likely under-reported in the data for two reasons. First, most enrollees do not self-report their race or ethnicity to Medicare.[b,8] Second, only one variable is used to describe the race-ethnicity of each enrollee. Thus those with multiracial backgrounds are represented in the data by one race or ethnicity only. According to 2010 Census data, over 40% of AIAN self-reported two or more races.[9] For these and other reasons, some AIAN may be classified as *other* or *white* in the *Medicare Beneficiary Summary File*.[c]

For this project, AIAN were classified into two categories: IHS AIAN and self-reported AIAN. IHS AIAN are AIAN who were identified to Medicare as AIAN registered to use I/T/U services, as described above in Data Sources. Other persons identified as AIAN in the *Medicare Beneficiary Summary File* were classified as *self-reported AIAN* regardless of how they were identified to Medicare as AIAN.[8] Persons who were identified as both IHS AIAN and self-reported AIAN were classified as IHS AIAN. The number of IHS AIAN identified as enrolled in Medicare in 2010 was 192,001. All findings are presented in Section III. Table 1.1, in Section III, provides enrollment information for AIAN and non-Hispanic white enrollees.

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[a] Persons who lived outside of the U.S. or for whom there was no geographic information were excluded from the analyses. Among AIAN, 1.2% were excluded for these reasons; i.e., 0.72% had missing information, and 0.48% lived outside the U.S. For AIAN and non-Hispanic whites combined, 3.1% were excluded for these reasons; i.e., 0.72% had missing information, and 0.48% lived outside the U.S.

[b] The majority of the self-reported information is from the Social Security Administration and was obtained at the time of enrollment in Social Security. The Social Security Administration is not allowed to ask a person's race or ethnicity. In addition, a very small number of persons who participated in the 1995 Medicare Beneficiary Survey self-reported being AIAN. (http://www.nasi.org/research/2005/medicare-race-ethnicity-data.)

[c] For example, the reported race of 0.3% of IHS AIAN was white or other in *Medicare Beneficiary Summary File.* Underreporting of AIAN race from the self-reported data is likely to be higher among AIAN who were not registered to use IHS services.

Due to the special trust responsibility between the U.S. government and Indian tribes, based on negotiated treaties, IHS AIAN are entitled to special considerations with regard to healthcare provided by the federal government. For this reason, we highlight findings for IHS AIAN in the main section of the report.

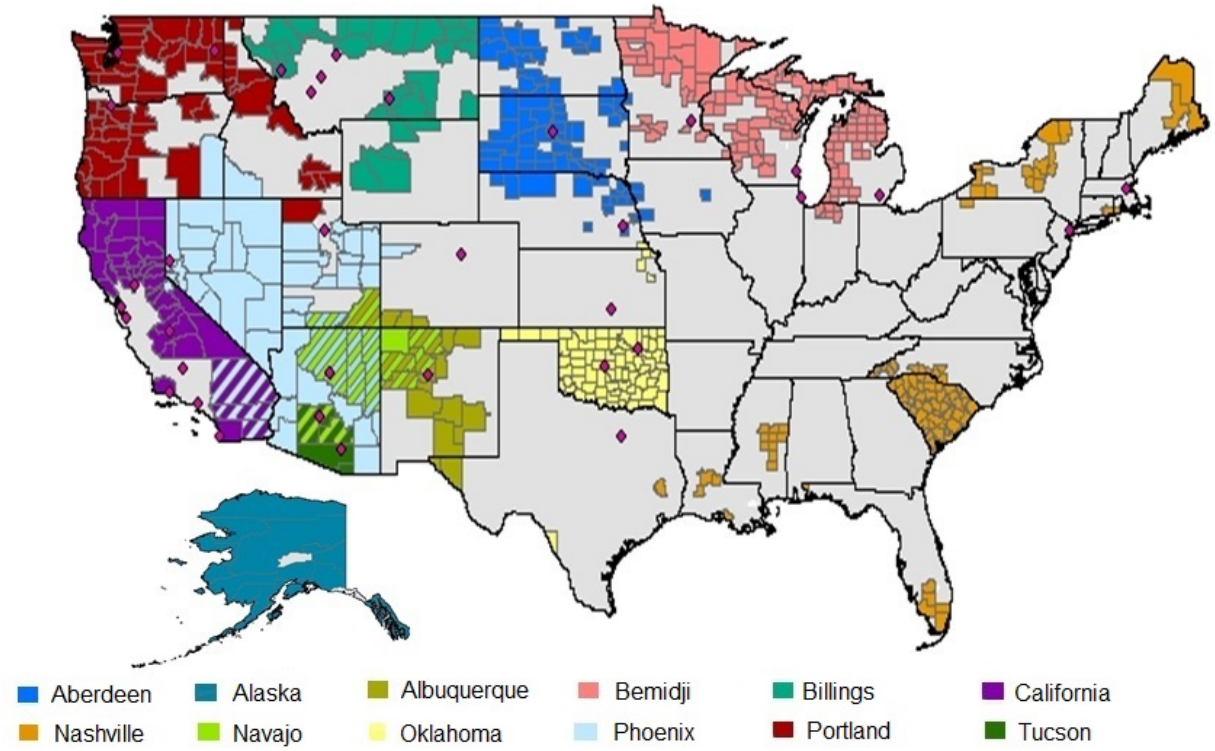
2.2. Geographic Location

The *Medicare Beneficiary Summary File* data on the Medicare enrollee's county and zip code were used with information on IHS Contract Health Service Delivery Area (CHSDA) counties to identify AIAN who lived on or near I/T service areas, defined by IHS as Service Units, and who may have used I/T services based on their geographic proximity to I/T services.

IHS Areas. IHS administers a system of health services through I/T/U providers in 12 geographic areas of the U.S. The IHS Areas are called Alaska, Albuquerque, Aberdeen, Bemidji, Billings, California, Nashville, Navajo, Oklahoma, Phoenix, Portland, and Tucson. CHSDA counties are located in 35 states, rather than all states, and consist of counties that include or are near the IHS Service Units. CHSDA counties and other information are used to identify which AIAN are eligible to receive services paid for by IHS Contract Health Service funds. The Contract Health Service program provides reimbursement for services not available within the IHS service system, such as specialty outpatient and inpatient services.

In this report, the 12 IHS Areas are represented by the CHSDA counties, the remaining counties are designated as *non-IHS Areas*; together they represent all U.S. counties. Medicare county data were used to identify persons who lived in a CHSDA county. Based on the IHS Area designations, persons living in a CHSDA county were assigned to one IHS Area. However, some IHS Area boundaries fall within a county. For persons living in such counties, Medicare zip code data were used with the 12 IHS Area definitions to identify the IHS Area in which they lived. Medicare enrollees who did not live in a CHSDA were assigned to the geographic category "non-IHS Areas." See Figure 1.

Figure 1. IHS Areas represented by Contract Health Service Delivery Areas (CHSDA).



[a] The map is based on CHSDA designations in 2006. Since that time, the CHSDA county designations have had minor changes, with counties being added to or removed from CHSDAs. These changes impacted Albuquerque, Nashville, and Phoenix areas.

3. Other Information

Below are definitions for other key variables used in analyses of Medicare eligibility, types of coverage, health status, service utilization, and payments.

Eligibility category. Medicare is a federal health insurance program for people age 65 and older, people under 65 years old with certain disabilities, and people of any age with end-stage renal disease (ESRD). In this report, these three eligibility categories are referred to as Aged, Disabled, and ESRD. For purposes of reporting on eligibility in this report, ESRD includes persons of all ages.

Type of coverage. The Medicare program provides payment for different types of services through Part A, Part B, Part C, and Part D coverage. In addition, Medicare enrollees may also be enrolled in Medicaid.

- Part A provides coverage for inpatient services at acute short-stay hospitals, other hospitals, and skilled nursing facilities (SNF) as well as for home health and hospice services.
- Part B provides coverage for outpatient services and durable medical equipment. Part B covered outpatient services include physician office, hospital outpatient, ambulatory surgery, laboratory, imagining, and dialysis services.
- Part C coverage indicates coverage for Medicare Advantage Plans. They include Health Maintenance Organizations (HMO), Preferred Provider Organizations, and other types of pre-payment plans that provide Part A and Part B benefits. Most offer prescription drug coverage as well. Part C coverage is referred to as capitated coverage.
- Part D provides coverage for outpatient prescription drugs.

Persons with Part A, B, or D coverage are considered to have fee-for-service (FFS) coverage; that is, coverage for which payments are made based on services used. This compares to capitated coverage provided through Medicare Advantage Plans; that is, coverage for which payments are made for each person enrolled in the plan—regardless of the services used.

Most Medicare enrollees do not pay a monthly premium for Part A coverage because they, or their spouses, are entitled to such coverage through payroll taxes they paid while working. However, most do pay a monthly premium for Part B and Part D coverage, although some have another source of payment for the premiums (such as a former employer, Medicaid or a tribe). The federal program *Extra Help* provides income assistance for Part D coverage for persons with limited incomes. Some Medicare Advantage Plans require monthly premium payments.

Low-income Medicare enrollees may be also enrolled in Medicaid if they meet the state Medicaid eligibility requirements (such as those pertaining to income, age, and disability), which vary across states. Persons with both types of coverage are referred to as Medicare and Medicaid dual eligibles. There are five different types of Medicare-Medicaid dual coverage, each with different eligibility requirements.

- *Special Low Income Medicare Beneficiaries* and *Qualified Individuals* are eligible to have Medicaid pay Medicare directly for Medicare Part B premiums. Medicare Part B benefits are the main benefits they receive; some may have coverage of prescribed medications.
- *Qualified Disabled Working Individuals* are eligible to have Medicaid pay Medicare for Medicare Part A premiums and are eligible to pay for Part B coverage themselves or through other means.
- *Qualified Medicare Beneficiaries* are eligible to have Medicaid pay for Medicare Premiums for Parts A and B, and Medicare deductibles and coinsurance. They are not eligible for other Medicaid benefits.
- *Full Benefit Dual Eligibles* have full benefits under the state Medicaid plan. They have Medicaid benefits listed above and coverage for Medicaid services not covered by Medicare (such as expanded home and SNF benefits, and transportation).

Length of coverage. Medicare enrollees may have Part A, B, C, or D coverage for a full year (12 months), 1-11 months, or no months. A continuous FFS population was defined to include enrollees with 12 months of both Part A and Part B coverage, and enrollees who had both types of coverage for each month they were alive. Enrollees with Part C, or capitated coverage, were excluded from the FFS population.

Data for persons in the continuous FFS population were used to examine the prevalence of chronic disease as well as service utilization and payments. With 12 months of inpatient and outpatient utilization data, findings for these measures are more comparable across groups, as they are based on data for a similar number of months of coverage; that is, they are not influenced by differences in enrollment. The continuous FFS population excluded persons with capitated coverage since the data do not include information on health status, service utilization, and payments for the months of capitated coverage.

Health status. The *2010 Medicare Beneficiary Summary File* includes data on the prevalence of 27 chronic diseases. They include diabetes, acute myocardial infarction, health failure, stroke, hypertension, chronic kidney disease, depression, cancer, asthma, Alzheimer's disease, and rheumatoid arthritis. See Appendix A for a complete list of the conditions. Diagnostic and other codes in the Medicare claims data were used to create the health status indicators.[10]

The list of chronic conditions does not include ESRD. However there are two other indicators of ESRD in the data; one is the ESRD eligibility indicator and the other, an indicator of ESRD status. Both indicators were used to assess the prevalence of ESRD among enrollees. The ESRD status indicator identified a small number of enrollees with ESRD who were not identified as being eligible for Medicare due to ESRD.[d] The report includes information on the prevalence of these conditions.

Service utilization. The *2010 Medicare Beneficiary Summary File* provides summary information on Medicare utilization for a number of categories of service. Inpatient services, covered by Part A, include the number of admissions and days of service for acute short-stay hospital, non-acute hospital, and SNF services. Non-acute hospital services include long-term care, psychiatric, rehabilitation, and children's hospitals. Hospice and home health services, though covered by Part A, are reported here as outpatient services. The majority of hospice services are provided in the home; other services are provided in inpatient facilities. The number of hospice stays, regardless of location, and days of service, regardless of location, are provided. For home health, the number of visits is reported.

Outpatient services, covered through Part B, include the number of emergency department visits that did not result in a hospital admission; physician, physician assistant, nurse practitioner, office, or clinic visits for evaluation and management;[e] other physician, physician assistant, or nurse practitioner visits; unique days that service was provided in a hospital outpatient setting;[f] and the number of ambulatory surgery procedures. Other physician, physician assistant, nurse practitioner visits include visits that occurred in the emergency department, in an inpatient setting, and at home, and visits conducted for the provision of other services (such as cardiovascular, orthopedic, gastrointestinal, optometric, and other types of medical procedures). The number of durable medical equipment (DME) items, covered by Part B, and the number of dispensed prescribed medications, covered by Part D, are also reported.[g]

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[d] There were 4,178 ESRD-eligible IHS AIAN enrollees with continuous fee-for-service coverage. An additional 250 IHS AIAN were identified as having ESRD using the ESRD status indicator. There were 39,970 ESRD eligible non-Hispanic white enrollees with continuous fee-for-service coverage. An additional 3,055 non-Hispanic white enrollees were identified as having ESRD using the ESRD status indicator.

[e] These visits are typical office/clinic visits and include those conducted by other medical personnel who provide similar services, such as a nurse midwife). Evaluation and management services include those conducted by primary care and specialty providers. Evaluation and management visits conducted in other settings (such as in a hospital or an emergency department) and visits conducted to obtain specific procedures are included in other service categories.

[f] This number includes emergency department visits and some of the reported outpatient visits conducted by physicians, physician assistants, nurse practitioners, and other providers if the service was provided in a hospital outpatient clinic, Federally Qualified Health Center, or a Rural Health Clinic. See Appendix A.

[g] The number of dispensed prescribed medications is based on the number of filled prescriptions covered by Part D. Since some prescriptions are for several months, the number is adjusted to account for the number of months a specific medication was provided. For example, if the dispensed medication included a 90-day supply, the number was adjusted from one to three.

Payments for services. Payments include those by made by the federal Medicare program and by other sources for Medicare coinsurance and deductibles for covered services, based on Medicare fee schedules. *Other payments* are defined as those made by other sources; that is, by Medicare enrollees and by other types of healthcare coverage they may have (such as Medicaid or private coverage).

Payment variables provide information on selected services (such as hospital inpatient, SNF, and hospice); however, in many cases, payments for a number of services are combined. For example, hospital outpatient payments include those for emergency department and hospital outpatient services. Other Part B covered services include Part B drugs, anesthesia, other medical procedures, and other types of covered services. Other medical procedures include a wide array of medical procedures such as cardiovascular, orthopedic, gastrointestinal, and optometric procedures. Other covered services include, but are not limited to, ambulance, chiropractor, chemotherapy, vision, hearing, and speech services.

Persons with high payments or high utilization (high cost/use). High cost/use patients are persons for whom Total payments were in the top 1% of IHS AIAN payments in their eligibility category or who had high use of specific types of inpatient or outpatient services.[h] Service utilization and payment findings are presented for all enrollees and separately for enrollees *who were* and *who were not* high cost/use patients. We identified high cost/use patients to first understand the impact they had on the overall averages, since a small number of persons with high values for Total payments or utilization may skew findings. Second, we wanted to understand more about patients who had high utilization or payments. Findings for enrollees who were and who were not high cost/use patients are presented in Part 8 of Section III and in Appendices C and D.

4. Analysis

This report includes findings for IHS AIAN and for all AIAN (that is, IHS AIAN combined with self-reported AIAN). In Section III, Parts 1 and 2 on enrollment and eligibility, we include findings for all AIAN. Starting in Section III, Part 3, we report findings for IHS AIAN who lived in IHS Areas. Findings for all AIAN, regardless of the geographic location, are provided in Appendix B.

As this is the first report to be written using the *Medicare Beneficiary Summary File,* it provides an overview of IHS AIAN Medicare enrollment, healthcare coverage, utilization, and payments, as well as the health status of IHS AIAN Medicare enrollees. These general findings are descriptive analyses and do not include statistical adjustments for differences between the groups of enrollees (such as adjustments for differences in age and health status). In-depth statistical analyses will be provided in policy briefs which address specific topics (such as inpatient hospital utilization, long-term care) in greater detail.

Throughout the report we include information on a reference population—non-Hispanic white Medicare enrollees—to provide some context for the AIAN findings. This report is meant to be an overview of information for IHS AIAN Medicare enrollees; it is not intended to be a report specifically on health disparities. Differences in health status, service utilization, and payments between the AIAN and non-Hispanic white populations cannot be fully understood without a more detailed understanding of how eligibility, age, Medicaid enrollment, geographic location, and other factors contribute to those differences. Such understanding may be obtained through statistical analyses that may be presented in a separate report.

To improve understanding of AIAN Medicare coverage, findings on Medicare Part B coverage for selected states are provided in Appendix E. The states were selected based on the number of IHS AIAN residents.

[h] Based on a review of utilization and payment data, enrollees identified as having *high use* had 15 or more admissions, 80 or more acute inpatient days, 80 or more other inpatient days, 100 or more of any inpatient days, 30 or more outpatient emergency department visits, 30 or more ambulatory surgery events, or 70 or more physician office visits.

III. FINDINGS

1. Medicare Enrollment

According to the CMS data, 219,888 Medicare enrollees in 2010 were identified as AIAN. Among the AIAN, 87% (n=192,001) were identified as IHS AIAN; that is, AIAN who were at one time registered to use IHS services. As noted in Section II. Methods, the data do not provide an indicator for whether the IHS AIAN used I/T services during 2010. Nearly 13% of AIAN were identified as self-reported AIAN, based on race information obtained by Medicare in other ways.

It is important to consider under-identification of AIAN when using the Medicare race data described in Section II. Methods.[8] According to American Community Survey data, collected by the U.S. Census, a greater number of AIAN had Medicare coverage in 2010 than was indicated by the Medicare race data.[5] The American Community Survey data provide evidence that there is under-identification of AIAN in the Medicare race data.

Table 1.1. Medicare enrollment of IHS AIAN [a], self-reported AIAN [b], and non-Hispanic white Medicare enrollees by geographic area. 2010.

Geographic area	IHS AIAN		Self-reported AIAN		IHS and self-reported AIAN		Non-Hispanic white	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
IHS Areas[c]	165,666	86.3%	6,927	24.8%	172,593	78.5%	9,562,612	23.7%
Non-IHS Areas	26,335	13.7%	20,960	75.2%	47,295	21.5%	30,769,331	76.3%
All U.S. locations	192,001	100.0%	27,887	100.0%	219,888	100.0%	40,331,943	100.0%

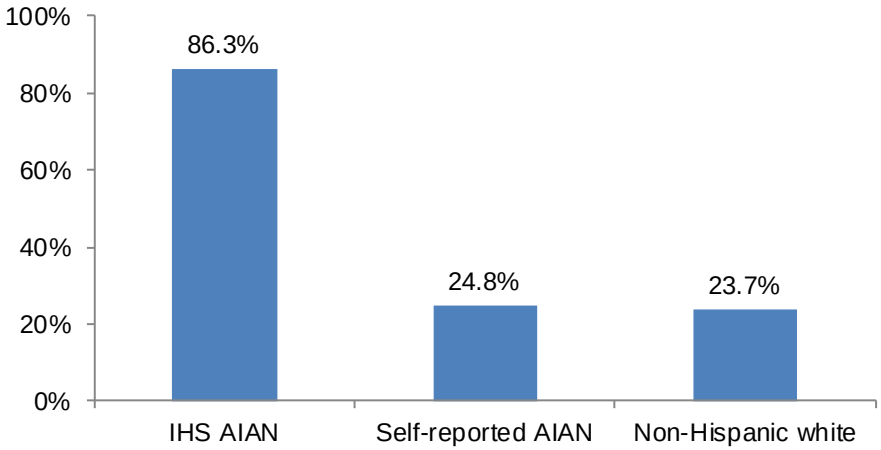
[a] IHS AIAN are persons who were registered to use IHS services.

[b] Self-reported AIANs are persons who have not used IHS services but self-reported race as AIAN.

[c] IHS Areas are represented by the subset of all counties that are Contract Health Service Delivery Area (CHSDA) counties; each location within a CHSDA was assigned to one of 12 IHS Areas.

Among the IHS AIAN, 86.3% lived in an IHS Area. In other words, the IHS AIAN lived in one of the CHSDA counties that included or were located near the IHS Service Units. The IHS AIAN who lived in the IHS Areas may have been more likely to use I/T services than IHS AIAN who lived in non-IHS Areas, due to their geographic proximity to the services. Since the Medicare data do not include an indicator of I/T service use, it is not possible to determine the percentage that actually used I/T services in 2010. Because IHS AIAN are identified to Medicare for purposes of classifying race and not service use, it is likely that there are IHS AIAN living in IHS Areas who did not use IHS system services in 2010. Among the non-Hispanic white enrollees, 23.7% lived in an IHS Area.

Figure 1.1. Percent of IHS AIAN, self-reported AIAN, and non-Hispanic white Medicare enrollees who lived in an IHS Area. 2010.



Throughout most of this report, we contrast findings for IHS AIAN who lived in one of the 12 IHS Areas to those for non-Hispanic white enrollees who lived in those areas. Table 1.2 provides information on Medicare enrollment of IHS AIAN and non-Hispanic Whites by IHS Area. For analysis of health status, service utilization and payments, data for persons with continuous FFS coverage is used. For that reason, Table 1.2 also includes information on the number of persons with continuous FFS coverage. In some IHS Areas, the number of IHS AIAN or non-Hispanic whites with continuous FFS coverage is small. The size of the population will be taken into consideration when reviewing utilization and payment findings by IHS Area in later sections of the report, since data for a small number of persons with very high utilization or payments may have a greater influence on findings for IHS Areas with small populations as compared to Areas with larger populations.

Table 1.2. Continuous fee-for-service coverage of IHS AIAN and non-Hispanic white Medicare enrollees by geographic area.[a] 2010.

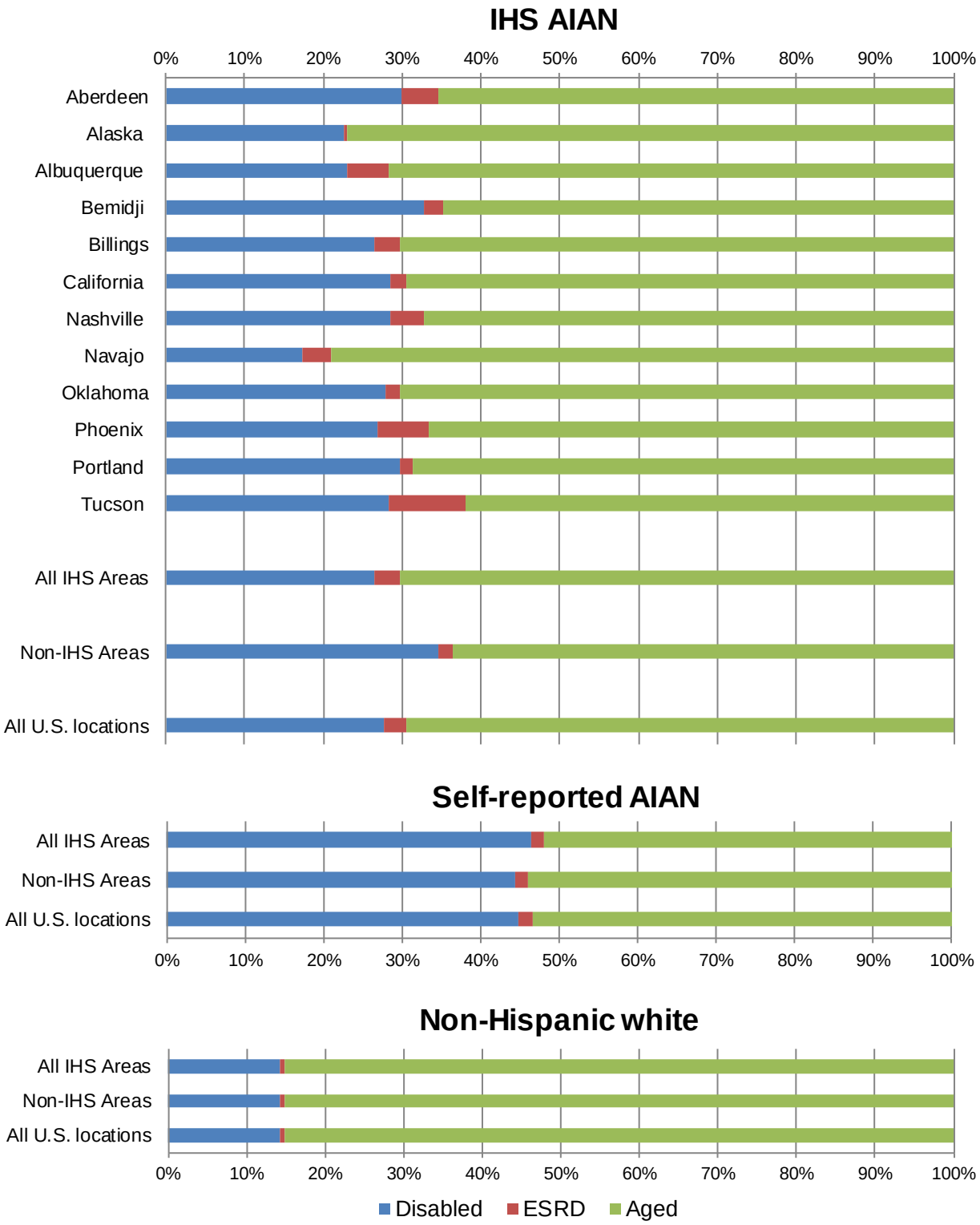
Geographic area	IHS AIAN					Non-Hispanic white				
	All persons		Persons with continuous fee-for-service coverage			All persons		Persons with continuous fee-for-service coverage		
	Number	Percent (column)	Number	Percent (column)	Percent (row)	Number	Percent (column)	Number	Percent (column)	Percent (row)
IHS Areas										
Aberdeen	9,387	5.7%	6,893	5.7%	73.4%	282,427	3.0%	216,018	3.7%	76.5%
Alaska	10,917	6.6%	8,794	7.2%	80.6%	52,049	0.5%	43,339	0.7%	83.3%
Albuquerque	11,185	6.8%	7,572	6.2%	67.7%	275,691	2.9%	156,924	2.7%	56.9%
Bemidji	12,253	7.4%	9,077	7.5%	74.1%	1,018,417	10.6%	665,700	11.3%	65.4%
Billings	6,249	3.8%	4,561	3.8%	73.0%	97,382	1.0%	71,067	1.2%	73.0%
California	11,342	6.8%	8,026	6.6%	70.8%	1,382,012	14.5%	748,753	12.7%	54.2%
Nashville	5,933	3.6%	4,613	3.8%	77.8%	3,109,861	32.5%	2,055,627	34.8%	66.1%
Navajo	18,804	11.4%	13,988	11.5%	74.4%	6,068	0.1%	4,369	0.1%	72.0%
Oklahoma	47,875	28.9%	36,432	30.0%	76.1%	559,845	5.9%	417,055	7.1%	74.5%
Phoenix	14,460	8.7%	9,875	8.1%	68.3%	1,111,480	11.6%	613,316	10.4%	55.2%
Portland	15,061	9.1%	10,232	8.4%	67.9%	1,506,528	15.8%	847,307	14.3%	56.2%
Tucson	2,200	1.3%	1,260	1.0%	57.3%	160,852	1.7%	75,644	1.3%	47.0%
All IHS Areas	165,666	100.0%	121,323	100.0%	73.2%	9,562,612	100.0%	5,915,119	100.0%	61.9%
Non-IHS Areas	26,335		17,781		67.5%	30,769,331		20,421,703		66.4%
All U.S. locations	192,001		139,104		72.4%	40,331,943		26,336,822		65.3%

[a] Medicare enrollees with continuous fee-for-service coverage include all persons with 12 months Part A and 12 months Part B coverage. Persons who passed away during the year are included who had full coverage for the months they were alive.

2. Enrollment by Eligibility Category

More IHS AIAN were eligible for Medicare because of a disability or ESRD than were non-Hispanic white enrollees. See Figure 2.1. More than one-fourth (26.6%) of IHS AIAN had Medicare enrollment due to disability, and 3.1% were enrolled with ESRD. Among non-Hispanic White enrollees, the percentages who were Disabled and who were enrolled with ESRD were much lower (14.2% and 0.6%, respectively). The percentage of IHS AIAN who were Aged was 70.4%. Because of smaller proportions of Disabled and ESRD enrollees, a much higher percentage of non-Hispanic White enrollees were Aged (85.2%).

Figure 2.1 Medicare eligibility categories of IHS AIAN, self-reported AIAN, and non-Hispanic white enrollees by geographic area.



Notes:
IHS AIAN are persons who were registered to used IHS services at some point in time.
Self-reported AIANs are persons identified as AIAN but who were not registered to use IHS services.
End Stage Renal Disease (ESRD) includes persons with ESRD eligibility of all ages.
IHS Areas are represented by the counties that are Contract Health Service Delivery Areas (CHSDA); each CHSDA county was assigned to one of the 12 IHS Areas.

3. Age of Medicare Enrollees

Across all three Medicare eligibility categories, IHS AIAN enrollees were younger than non-Hispanic white enrollees. Figures 3.1-3.3 provide information on the age distribution of enrollees by eligibility category for IHS AIAN and non-Hispanic white enrollees who lived in an IHS Area. Findings for all AIAN, regardless of geographic location, are provided in Appendix B.

A larger percentage of Disabled IHS AIAN than Disabled non-Hispanic white enrollees were less than 45 years old (28.0% as compared to 21.0%, respectively). See Figure 3.1. Similarly, among the Aged, a higher percentage of IHS AIAN were younger. See Figure 3.2. Among Aged IHS AIAN, 32.5% were between the ages of 65 and 69 years; the percentage among Aged non-Hispanic white was 29.9%. Conversely, a smaller percentage of Aged AIAN were age 80 years and older (22.1% as compared to 29.5%, respectively).

Findings for those eligible for Medicare due to ESRD are presented in Figure 3.3. The majority of IHS AIAN with ESRD were younger than 65 years old (63.2%), while the majority of non-Hispanic white enrollees with ESRD were age 65 and older (55.9%).

Figure 3.1. Age distributions of Disabled IHS AIAN and non-Hispanic white Medicare enrollees who lived in an IHS Area. 2010.

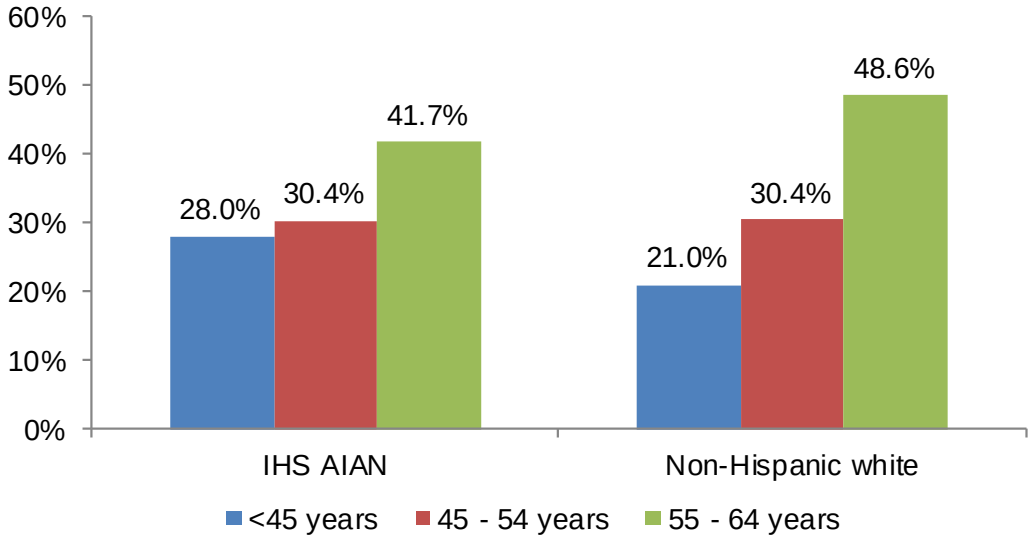


Figure 3.2. Age distributions of Aged IHS AIAN and non-Hispanic white Medicare enrollees who lived in an IHS Area. 2010.

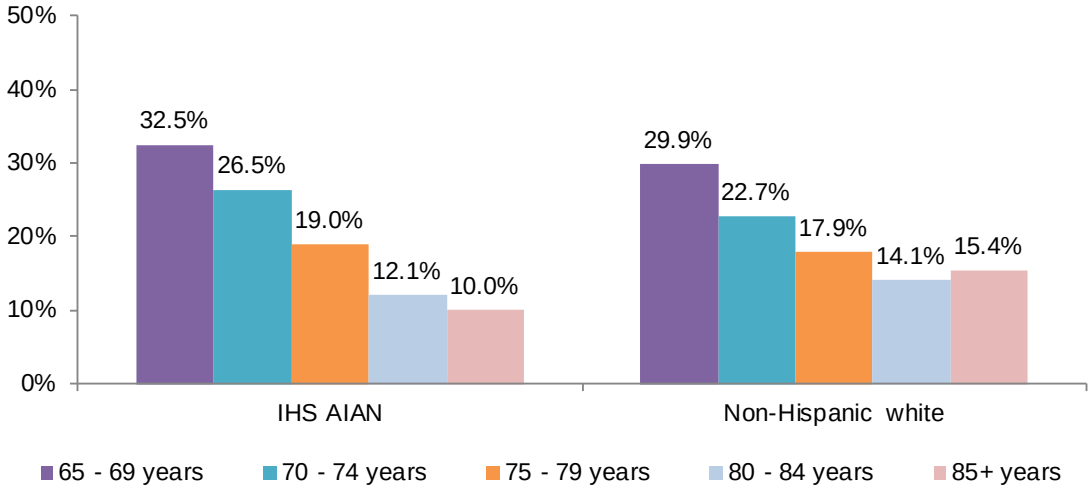
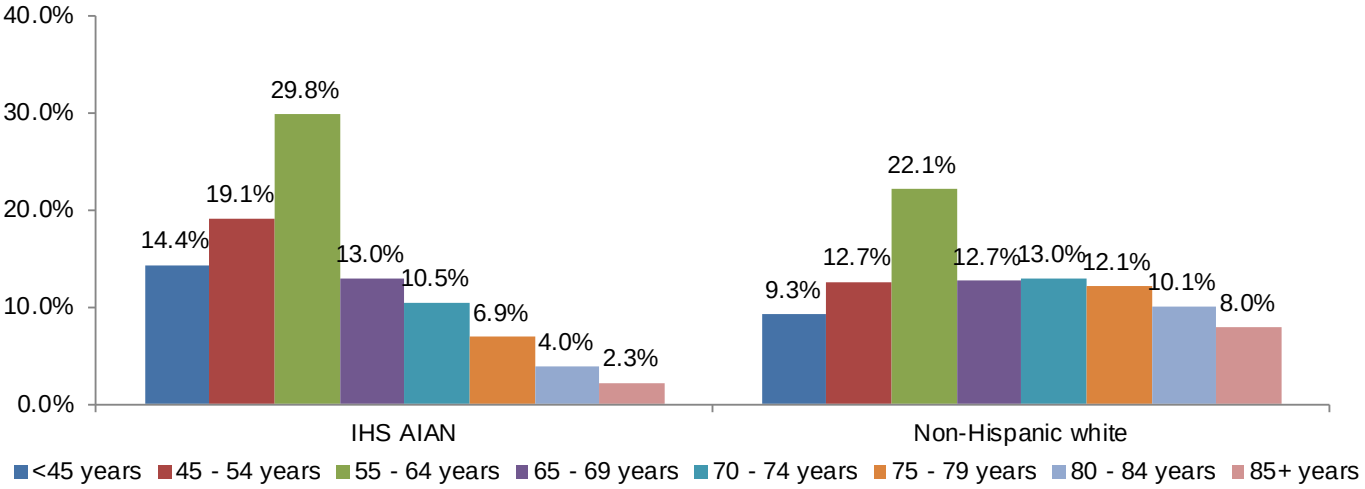


Figure 3.3. Age distributions of ESRD eligible IHS AIAN and non-Hispanic white Medicare enrollees who lived in an IHS Area. 2010.



4. Healthcare Coverage

Figures 4.1-4.6 and Tables 4.1 and 4.2 provide healthcare coverage information for 2010 for IHS AIAN and non-Hispanic white enrollees who lived in an IHS Area. The findings include information on Medicaid and capitated coverage, and coverage for Medicare Part A, B, and D services

4.1. Medicaid Coverage

Twice as many IHS AIAN Medicare enrollees as non-Hispanic white enrollees were also enrolled in Medicaid. See Figure 4.1. Among AIAN Medicare enrollees, 21.6% were dually enrolled in Medicaid during at least one month in 2010; this compares to 9.9% of non-Hispanic white enrollees. The majority of those who were dually enrolled in Medicare and Medicaid were enrolled in Medicaid for 12 months. For example, 20.4% of IHS AIAN were enrolled in Medicaid for 12 months and only 1.2% were enrolled in Medicaid for one to eleven months.

4.2. Enrollment in Medicare Advantage Plans—Capitated Plans (known as Part C coverage)

Fewer IHS AIAN Medicare enrollees were enrolled in Medicare capitated plans than non-Hispanic white enrollees. See Figure 4.2. Medicare Part C coverage is known as coverage for Medicare Advantage Plans; we refer to these plans as capitated plans. Among the IHS AIAN who lived in IHS Areas, 7.7% were enrolled in capitated plans such as HMOs for 12 months. This compares to 24.4% among the non-Hispanic white enrollees who lived in the same locations.

Table 4.1 provides detailed information on the number of months of FFS and capitated coverage among IHS AIAN and non-Hispanic white enrollees. The majority of Medicare enrollees in both populations had FFS coverage; that is, Parts A, B, and/or D). Among IHS AIAN and non-Hispanic white enrollees those with FFS coverage, over 90% had Part A and/or Part B coverage for 12 months. Among those with capitated coverage, over 80% had such coverage for 12 months.

Figure 4.1. Medicaid coverage among IHS AIAN and non-Hispanic white Medicare enrollees who lived in an IHS Area. 2010.

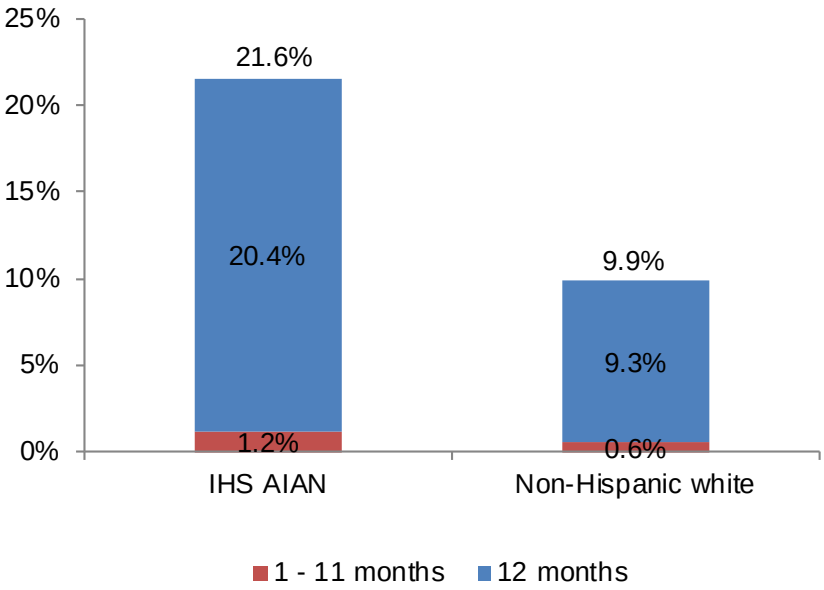


Figure 4.2. Capitated coverage among IHS AIAN and non-Hispanic white Medicare enrollees who lived in an IHS Area. 2010.

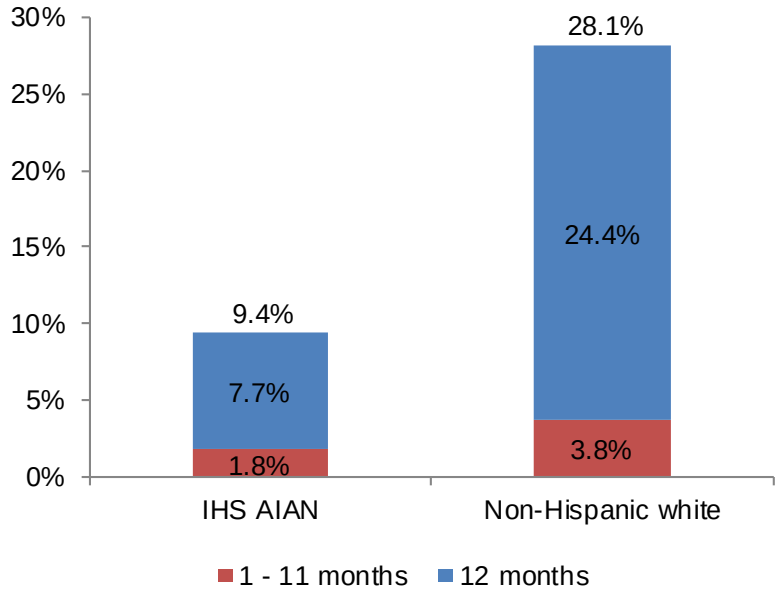


Table 4.1. Fee-for-service and capitated coverage of IHS AIAN and non-Hispanics white Medicare enrollees who lived in an IHS Area. 2010.

Coverage		IHS AIAN			Non-Hispanic white		
		Number	Percent of IHS AIAN	Percent within coverage type	Number	Percent of non-Hispanic white	Percent within coverage type
Fee-for-service:	1-12 months	150,019	90.6%	100.0%	6,870,770	71.9%	100.0%
	12 months	135,075	81.5%	90.0%	6,205,910	64.9%	90.3%
	1-11 months	14,944	9.0%	10.0%	664,860	7.0%	9.7%
Capitated coverage:	1-12 months	15,647	9.4%	100.0%	2,691,842	28.1%	100.0%
	12 months	12,713	7.7%	81.2%	2,329,880	24.4%	86.6%
	1-11 months	2,934	1.8%	18.8%	361,962	3.8%	13.4%
All persons		165,666	100.0%		9,562,612	100.0%	

4.3. Fee-for-Service Coverage—Medicare Parts B and D

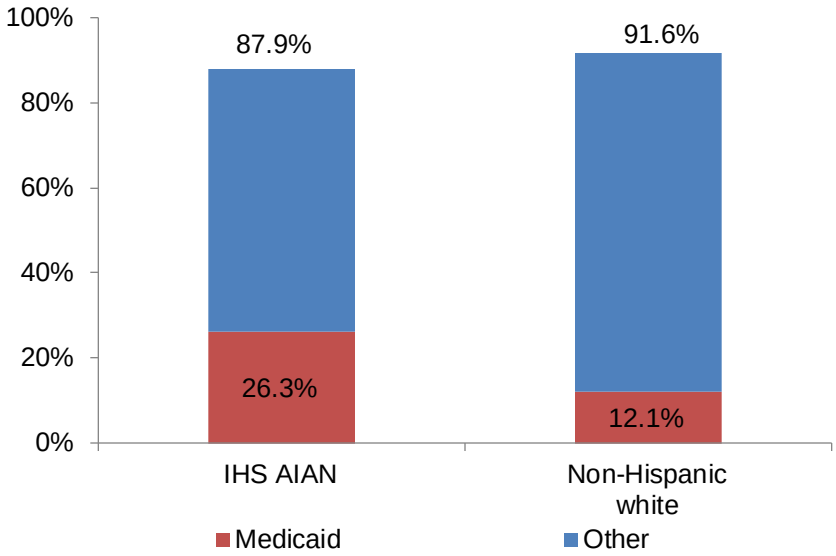
IHS AIAN had a somewhat lower rate of Medicare Part B coverage than did non-Hispanic white enrollees. The percentage of IHS AIAN and non-Hispanic white enrollees with 12 months of Part B coverage (that is, coverage for outpatient services and DME) among those with Part A coverage (that is, coverage for inpatient, home health, hospice services) was 87.9% and 91.6%, respectively. Table 4.2 provides detailed information on the number of months of Part B coverage for both populations. Since premiums must be paid for Part B coverage, enrollees with limited financial resources may not have such coverage.

Twice as many IHS AIAN as non-Hispanic white enrollees had Part B coverage paid by Medicaid. See Figure 4.3. Just over one-fourth (26.3%) of IHS AIAN had Part B coverage due to Medicaid enrollment; this compares to 12.1% of non-Hispanic white enrollees.

Table 4.2. Medicare fee-for-service coverage among IHS AIAN and non-Hispanic white persons who lived in an IHS Area. 2010.

Coverage	IHS AIAN		Non-Hispanic white	
	Number	Percent	Number	Percent
Part B coverage				
12 months	116,375	87.9%	5,665,734	91.6%
1-11 months	3,004	2.3%	94,768	1.5%
None	12,973	9.8%	421,708	6.8%
Part D coverage				
12 months	49,251	37.2%	2,080,719	33.7%
1-11 months	599	0.5%	18,481	0.3%
None	82,502	62.3%	4,083,010	66.0%
Part A coverage for 12 months	132,352	100.0%	6,182,210	100.0%

Figure 4.3. Part B coverage (12 months) among IHS AIAN and non-Hispanic white Medicare enrollees with 12 months Part A coverage and who lived in an IHS Area. 2010.



[a] Among IHS AIAN enrollees with 12 months Part B coverage, Medicaid paid the premium for Part B coverage for 26.3% of those with 12 months Part A coverage.
Among non-Hispanic white enrollees with 12 months Part B coverage, Medicaid paid the Part B premium for 12.1% of those with 12 months Part A coverage.

Among IHS AIAN, Part B coverage varied by IHS Area. Figure 4.4 provides information on Part B coverage (12 months) among IHS AIAN with 12 months of Part A coverage. In some IHS Areas, less than 85% of IHS AIAN had Part B coverage for 12 months.

In three IHS Areas (Aberdeen, Navajo, and Tucson), over 30% of IHS AIAN had Part B coverage due to Medicaid payment or buy-in for the coverage. As may be expected, variation across states in Medicaid eligibility requirements and IHS AIAN household resources account for some of the Medicaid Part B coverage differences by IHS Area.

IHS AIAN with 12 months of Part A coverage had a somewhat higher rate of Medicare Part D coverage for prescribed medications than did non-Hispanic white enrollees. Part D coverage rates were 37.2% and 33.7%, respectively. See Figure 4.5. Similar to Part B coverage, a greater percentage of IHS AIAN than non-Hispanic white enrollees had such coverage due to dual enrollment in Medicaid. The percentage of IHS AIAN with Medicaid buy-in for Part D coverage was more than double that of non-Hispanic white enrollees (21.6% and 9.5%, respectively).

Figure 4.4. Part B coverage (12 months) among IHS AIAN Medicare enrollees with 12 months Part A coverage by IHS Area. 2010.

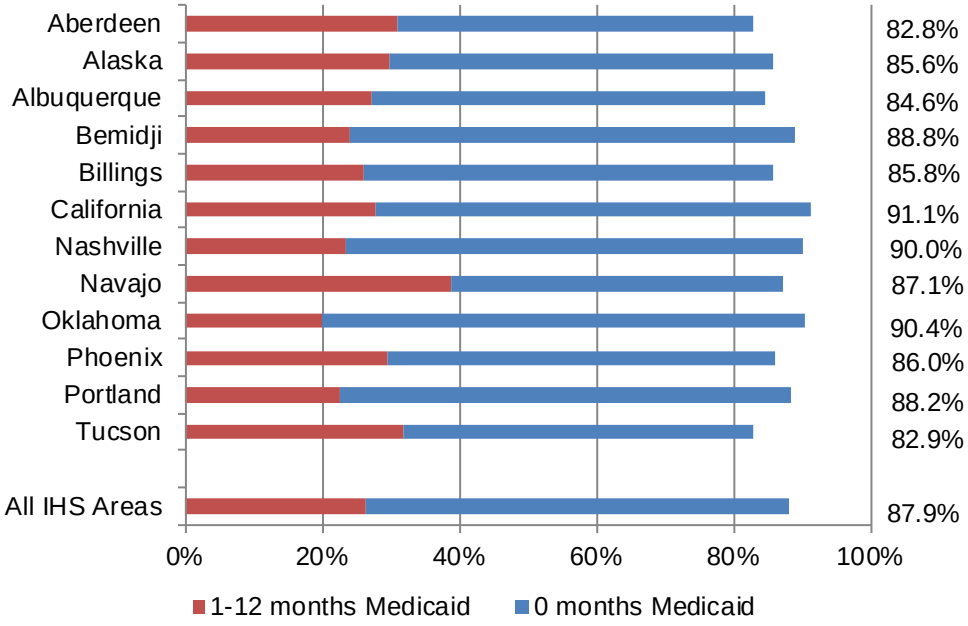
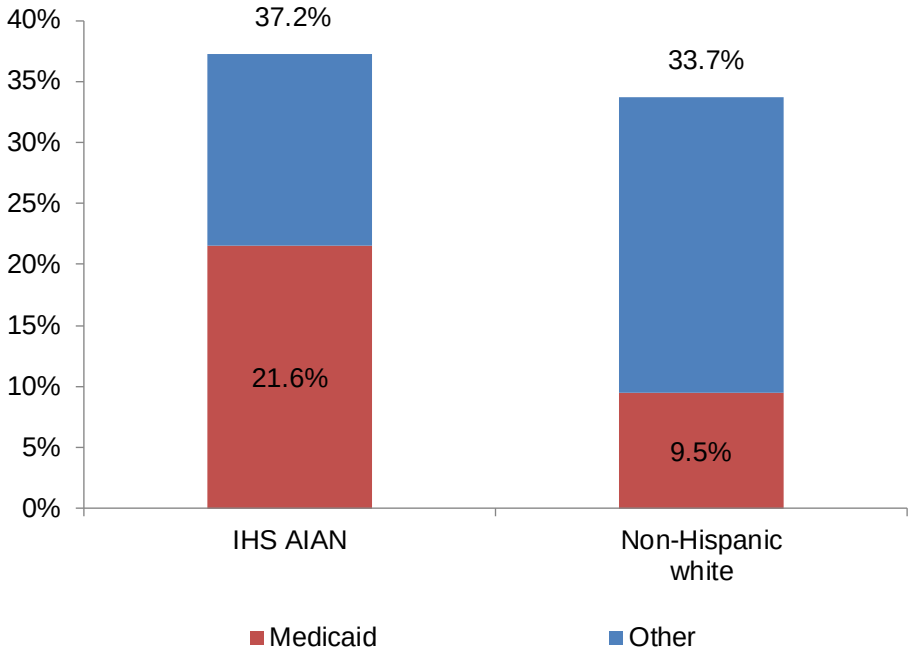


Figure 4.5. Part D coverage (12 months) among IHS AIAN and non-Hispanic white Medicare enrollees with 12 months Part A coverage and who lived in an IHS Area. 2010.

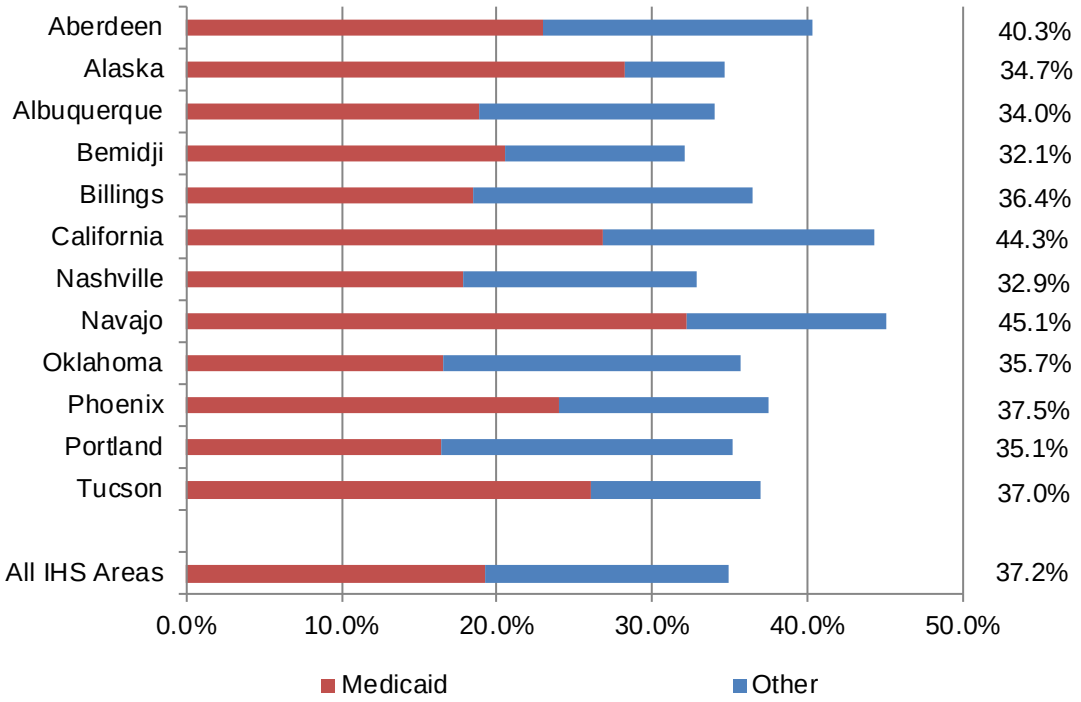


Among IHS AIAN enrollees with 12 months of Part A and Part D coverage, Medicaid paid the premium for Part D coverage for 21.6%. Among the non-Hispanic white enrollees this percent was 9.5%. It is important to note that Medicaid may not have paid the Part D premium for all 12 months.

Part D coverage among IHS AIAN varied by IHS Area. Figure 4.6 depicts the variation in Part D coverage and Medicaid buy-in for such coverage by IHS Area. Rates of Part D coverage ranged from a low of 32.1% to a high of 45.1%, with some variation explained by Medicaid coverage.

Variation in Part B and Part D coverage across IHS Areas not only influences IHS AIAN financial access to covered services, it also influences the ability of I/T providers to bill Medicare for Part B and Part D covered services.

Figure 4.6. Part D coverage (12 months) among IHS AIAN Medicare enrollees with 12 months Part A coverage by IHS Area. 2010.



Among IHS AIAN enrollees with 12 months of Part A and Part D coverage, Medicaid paid the premium for Part D coverage for 21.6. It is important to note that Medicaid may not have paid the Part D premium for all 12 months.

5. Health Status

The prevalence of diabetes among IHS AIAN was 1.6 times as high as that for non-Hispanic white enrollees, despite the fact that the IHS AIAN were younger. The prevalence rates among IHS AIAN and non-Hispanic white enrollees were 38.9% and 23.8%, respectively. See Table 5.1.

Table 5.1. Prevalence of health conditions among IHS AIAN and non-Hispanic white Medicare enrollees who lived in an IHS Area.[a] 2010.

Health condition	IHS AIAN		Non-Hispanic white	
	Number	Percent	Number	Percent
All persons	121,323	100.0%	5,915,119	100.0%
Diabetes	47,139	38.9%	1,409,542	23.8%
Hypertension	66,132	54.5%	3,155,723	53.4%
Hyperlipidemia	39,059	32.2%	2,534,984	42.9%
Cardiovascular disease [b]	40,137	33.1%	2,163,686	36.6%
Acute myocardial infarction	1,168	1.0%	52,749	0.9%
Atrial fibrillation	4,895	4.0%	502,526	8.5%
Coronary heart failure	18,658	15.4%	867,140	14.7%
Ischemic heart disease	31,774	26.2%	1,684,276	28.5%
Stroke/Transient ischemic attack	3,750	3.1%	218,172	3.7%
Chronic kidney disease	21,148	17.4%	790,808	13.4%
End stage renal disease	4,428	3.6%	43,025	0.7%
Cancer [c]	6,220	5.1%	486,066	8.2%
Depression	19,517	16.1%	841,674	14.2%
Alzheimer's disease & related conditions	9,482	7.8%	607,136	10.3%
Other health conditions				
Chronic obstructive pulmonary disease	14,469	11.9%	666,954	11.3%
Asthma	7,132	5.9%	259,320	4.4%
Osteoporosis	5,884	4.8%	407,828	6.9%
Rheumatoid arthritis/ osteoarthritis	33,541	27.6%	1,625,313	27.5%
Average number of health conditions [d]	2.7		2.7	

[a] The table includes data for enrollees with continuous FFS coverage.

[b] One or more of the five cardiovascular conditions listed in this table.

[c] Data are for five types of cancer: colorectal, endometrial, breast, lung, and prostate.

[d] There were 15 selected conditions counted for this analysis: Alzheimer's/dementia, arthritis (including rheumatoid and osteoarthritis), asthma, atrial fibrillation, cancer (breast, colorectal, lung, and prostate), chronic kidney disease, chronic obstructive pulmonary disease, depression, diabetes, heart failure, hyperlipidemia (high cholesterol), hypertension (high blood pressure), ischemic heart disease, osteoporosis, stroke/transient ischemic attack.

Table 5.1 includes prevalence rates for a number of other chronic conditions. It is important to note that IHS AIAN enrollees are younger than non-Hispanic white enrollees, and the prevalence rates presented in Table 5.1 are not age adjusted to account for this age difference. For example, adults age 75 years and older are more likely to have conditions such as cardiovascular disease and Alzheimer's disease than younger adults. Thus, this age difference needs to be considered when reviewing Table 5.1 findings.

IHS AIAN had higher rates of ESRD, chronic kidney disease, and depression compared to non-Hispanic white enrollees. Among IHS AIAN, 3.6% had ESRD; the prevalence among non-Hispanic white enrollees was 0.7%. The prevalence of chronic kidney disease was 17.4% and 13.4%, respectively, among IHS AIAN and non-Hispanic white enrollees. For depression, the prevalence was 16.1% and 14.2%, respectively. The prevalence of hypertension was similar in both populations, with 54.5% of IHS AIAN and 53.4% of non-Hispanic white enrollees having the condition.

The prevalence of cardiovascular disease, five types of cancer, and Alzheimer's disease and related conditions was lower among IHS AIAN than non-Hispanic white enrollees. The prevalence of cardiovascular disease was 33.1% and 36.6%, respectively, among IHS AIAN and non-Hispanic white enrollees. For the five types of cancer (colorectal, endometrial, breast, lung, and prostate), the prevalence was 5.1% and 8.2%, respectively. The rates for Alzheimer's disease and related conditions were 7.8% and 10.3%, respectively.

In order to provide some understanding of the general health status of Medicare enrollees, data on the prevalence of specific conditions were used to calculate the average number of conditions in both populations. The 15 selected conditions counted for this analysis were diabetes, hypertension, hyperlipidemia, atrial fibrillation, coronary heart failure, ischemic heart disease, stroke/transient ischemic attack, chronic kidney disease, cancer, depression, Alzheimer's disease and related conditions, chronic obstructive pulmonary disorder, asthma, osteoporosis, and rheumatoid and osteoarthritis. The average number of conditions in both populations was 2.7.

In order to provide some understanding of the general health status of Medicare enrollees, data on the prevalence of specific conditions were used to calculate the average number of conditions in both populations. The 15 selected conditions counted for this analysis were diabetes, hypertension, hyperlipidemia, atrial fibrillation, coronary heart failure, ischemic heart disease, stroke/transient ischemic attack, chronic kidney disease, cancer, depression, Alzheimer's disease and related conditions, chronic obstructive pulmonary disorder, asthma, osteoporosis, and rheumatoid and osteoarthritis. The average number of conditions in both populations was 2.7.

IHS AIAN had a higher prevalence of diabetes than non-Hispanic white enrollees across all age groups. See Table 5.2. Among IHS AIAN less than 45 years old, the prevalence was 19.1%; this compares to 12.1% among non-Hispanic white enrollees. Among IHS AIAN age 55 to 85 years, the prevalence was over 40%. The prevalence of diabetes was lower in both populations among those age 85 and older, yet the rate was still higher among the IHS AIAN (32.4% as compared to 22.5%).

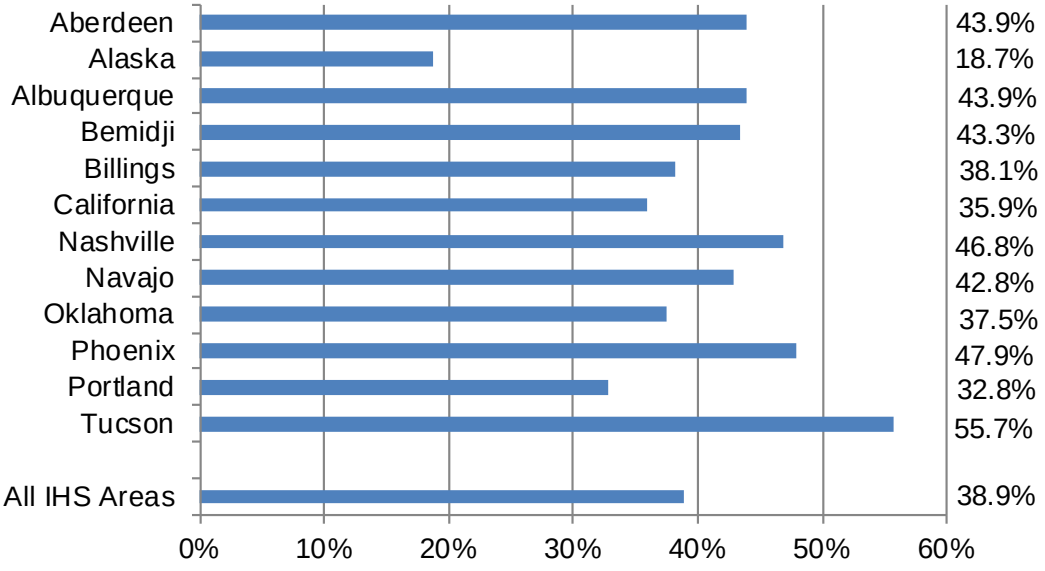
Table 5.2. Prevalence of diabetes by age among IHS AIAN and non-Hispanic white Medicare enrollees who lived in an IHS Area.[a] 2010.

Age group	IHS AIAN			Non-Hispanic white		
	All persons	Persons with diabetes		All persons	Persons with diabetes	
	Number	Number	Percent	Number	Number	Percent
<45 years	9,842	1,934	19.7%	199,118	24,138	12.1%
45 - 54 years	10,933	3,795	34.7%	275,789	57,455	20.8%
55 - 64 years	14,792	6,864	46.4%	406,225	116,119	28.6%
65 - 74 years	47,677	19,834	41.6%	2,407,273	554,427	23.0%
75 - 84 years	28,686	11,673	40.7%	1,733,987	456,956	26.4%
85+ years	9,393	3,039	32.4%	892,727	200,447	22.5%
All ages	121,323	47,139	38.9%	5,915,119	1,409,542	23.8%

[a] The table includes data for enrollees with continuous FFS coverage.

Figure 5.1 shows the prevalence of diabetes among IHS AIAN by IHS Area. While the prevalence was under 20% in Alaska, it was between 30% and 40% in four Areas (Billings, California, Oklahoma, and Portland) and over 40% in the other seven IHS Areas. The prevalence was highest in Tucson, where 55.7% of IHS AIAN Medicare enrollees had diabetes.

Figure 5.1. Prevalence of diabetes among AIAN Medicare enrollees who lived in an IHS Area.[a] 2010.



[a] This figure includes data for enrollees with continuous FFS coverage.

Persons with diabetes are at risk for other chronic conditions, such as cardiovascular disease and ESRD. Table 5.3 provides information on comorbidities among those with diabetes. Similar to Table 3.1, the prevalence rates are not age adjusted.

The prevalence of ESRD among IHS AIAN with diabetes was four times higher than that among non-Hispanic white enrollees, despite the IHS AIAN population being younger. Among those with diabetes, the prevalence of ESRD was 8.1% among the IHS AIAN with diabetes and 2.0% among non-Hispanic white enrollees with diabetes. Among the IHS AIAN with ESRD, 86.6% also had diabetes.

Findings concerning the prevalence of a number of other chronic conditions among those with diabetes revealed many similar trends to those of enrollees presented in Table 5.1. While the prevalence of hypertension was similar among IHS AIAN and non-Hispanic white enrollees with diabetes (76.0% and 76.8%, respectively), the prevalence of cardiovascular disease, cancer, and Alzheimer's disease and related conditions was higher among the non-Hispanic white enrollees with diabetes. For example, the prevalence of cardiovascular disease was 47.1% and 54.4%, respectively, among IHS AIAN and non-Hispanic white enrollees with diabetes. In contrast to the findings on depression for those with and without diabetes, presented in Table 3.1, IHS AIAN and non-Hispanic white enrollees with diabetes had similar rates of depression.

Table 5.3. Prevalence of comorbidities among IHS AIAN and non-Hispanic white Medicare enrollees with diabetes who lived in an IHS Area.[a] 2010.

Health condition	IHS AIAN		Non-Hispanic white	
	Number	Percent	Number	Percent
All persons with diabetes	47,139	100.0%	1,409,542	100.0%
Comorbidities				
Hypertension	35,803	76.0%	1,081,931	76.8%
Hyperlipidemia	22,624	48.0%	891,231	63.2%
Cardiovascular disease [b]	22,192	47.1%	767,203	54.4%
Acute myocardial infarction	747	1.6%	22,929	1.6%
Atrial fibrillation	2,374	5.0%	165,234	11.7%
Coronary heart failure	11,588	24.6%	364,620	25.9%
Ischemic heart disease	18,039	38.3%	627,501	44.5%
Stroke/Transient ischemic attack	2,019	4.3%	77,028	5.5%
Chronic kidney disease	14,845	31.5%	366,236	26.0%
End stage renal disease	3,835	8.1%	27,576	2.0%
Cancer [c]	2,591	5.5%	126,238	9.0%
Depression	8,667	18.4%	249,538	17.7%
Alzheimer's disease & related conditions	4,111	8.7%	180,826	12.8%
Other health conditions				
Chronic obstructive pulmonary disease	6,627	14.1%	225,041	16.0%
Asthma	3,515	7.5%	84,082	6.0%
Osteoporosis	2,122	4.5%	80,562	5.7%
Rheumatoid arthritis/ Osteoarthritis	14,627	31.0%	455,950	32.3%
Average number of health conditions [d]	4.2		4.5	

[a] The table includes data for enrollees with continuous FFS coverage.

[b] One or more of the five cardiovascular conditions listed in this table.

[c] Data are for five types of cancer: colorectal, endometrial, breast, lung, and prostate.

[d] There were 15 selected conditions counted for this analysis: Alzheimer's/dementia, arthritis (including rheumatoid and osteoarthritis), asthma, atrial fibrillation, cancer (breast, colorectal, lung, and prostate), chronic kidney disease, chronic obstructive pulmonary disease, depression, diabetes, heart failure, hyperlipidemia (high cholesterol), hypertension (high blood pressure), ischemic heart disease, osteoporosis, stroke/transient ischemic attack.

6. Health Service Utilization

Information on health service utilization during 2010 is provided for IHS AIAN and non-Hispanic white enrollees who:

1. Lived in an IHS Area and
2. Had continuous FFS coverage.

Inpatient utilization is primarily paid for through Part A coverage. Findings for acute short-stay hospitals, other hospitals, and SNF are presented in Tables 6.1.a. and 6.1.b. Table 6.1.a. includes the aggregate amount of inpatient service use, and Table 6.1.b., the average inpatient service use per person.

Outpatient utilization, primarily paid for through Part B coverage, includes utilization in emergency departments; physician, physician assistant, and nurse practitioner offices/clinics; other physician, physician assistant, and nurse practitioner visits; hospital outpatient clinics; and ambulatory surgery centers. We also present utilization of prescribed medications paid for by Part D, DME services paid for by Part B, and home health and hospice services paid for by Part A. The majority of hospice services are provided in the home, as compared to inpatient hospice facilities. For this reason, hospice service data are presented in outpatient utilization tables. Table 6.2.a. includes the aggregate amount of outpatient service use, and Table 6.2.b., the average outpatient service use per person.

Most analyses of utilization and payments find a small percentage of users with exceptionally high payments for services or amounts of service use, or both. This small percentage of users may affect utilization rates, especially when comparing groups with small numbers of enrollees. High cost/use patients were defined as persons for whom Total payments were in the top 1% of IHS AIAN payments in their eligibility category or persons who had high use of specific types of inpatient or outpatient services.[i] In *Findings* sections 6 and 7, we present findings for IHS AIAN and non-Hispanic white enrollees with data for the high cost/high use patients *included*. In section 8, we provide results for high cost/use patients *alone*. Appendices C and D include findings for enrollees after *excluding* data for high cost/use patients from the analyses.

Although we report on utilization differences between IHS AIAN and non-Hispanic white enrollees, it is not possible to fully understand factors contributing to the differences without conducting detailed statistical analyses. Such analyses may examine how differences in age, health status, Medicaid enrollment, Part B and D coverage, geographic location (such as rural location), variation in practice patterns, differences in claims submission, and other factors contribute to the utilization results. This is true for reported differences between IHS AIAN and non-Hispanic white enrollees, and for differences across IHS Areas.

6.1. Inpatient Utilization—All Eligibility Categories

The average number of inpatient days for IHS AIAN in short-stay and other hospitals was 1.4 times as high as that for the reference group. IHS AIAN spent, on average, 2.4 days in hospitals per person. Utilization by non-Hispanic white enrollees averaged 1.8 days per person. See Table 6.1.b. When data for high cost/use patients were excluded from the analyses, average utilization rates were lower among the IHS AIAN and non-Hispanic White enrollees, as would be expected. The average number of hospital days per person was 1.9 and 1.4, respectively, for IHS AIAN and non-Hispanic white enrollees. However, despite the lower rates, the magnitude of the utilization difference between IHS AIAN and non-Hispanic whites remained, with utilization by IHS AIAN being 1.4 times as high. Appendix C includes utilization findings for analyses conducted with data for high cost/use patients excluded.[j]

[i] Based on a review of utilization and payment data, enrollees identified as having *high use* had 15 or more admissions, 80 or more acute inpatient days, 80 or more other inpatient days, 100 or more of any inpatient days, 30 or more outpatient emergency department visits, 30 or more ambulatory surgery events, or 70 or more physician office visits.

[j] Hereafter, we only report findings from analyses that excluded data for high cost/use patients, provided in Appendix C and D, when they differed substantially from those reported in the text.

The average number of admissions by all IHS AIAN to acute short-stay hospitals was 0.4 per person and IHS AIAN spent, on average, 1.9 days in acute short-stay hospitals. Of these admissions, 18.3% were hospital readmissions; a readmission is an admission within 30 days of the discharge date of a previous hospital stay. For non-Hispanic white persons, use of acute care hospitals was lower. The average number of admissions was 0.3 per person and the average number of days spent in the hospital was 1.4 days per person. The non-Hispanic white readmission rate was lower than that for IHS AIAN (16.0%). Acute short-stay hospital readmission rates are considered a quality measure monitored by CMS, since hospital readmissions are influenced by the quality of services provided in the hospital and upon discharge. CMS provides incentives to reduce rates of unnecessary hospital readmissions.

Non-acute hospitals include long-term care, psychiatric, rehabilitation, and children's hospitals. Although the admission rate to non-acute hospitals by IHS AIAN was much lower than that for acute hospitals (0.03 admissions per person), the average number of non-acute hospital days per person was 0.5 due to longer lengths of stay in such hospitals. For non-Hispanic white persons, use of long term care hospitals was also lower. The average number of admissions was the same as that for IHS AIAN (0.03 admissions per person). The average length of stay was shorter and resulted in a lower average number of inpatient days per person (0.3 days per person).

Unlike use of inpatient hospital services, utilization of SNF was lower for IHS AIAN than the reference group. The admission rate for non-Hispanic white enrollees was 1.2 times higher than that for IHS AIAN. Among IHS AIAN, the average number of SNF days was 1.5 per person, compared to 1.8 days for non-Hispanic white enrollees.

6.2. Inpatient Utilization for the Disabled and Aged Eligibility Categories

Among IHS AIAN, inpatient hospital utilization by Disabled and Aged persons was similar despite differences in age. The admission rate for all types of hospital stays averaged 0.4 admissions per person for both eligibility categories. The average number of inpatient hospital days was 2.2 and 2.1 days per person, respectively, for Disabled and Aged persons. However, Disabled persons spent more days in non-acute hospitals than did Aged persons (0.6 and 0.3 days, respectively). Utilization of SNF was higher among Aged IHS AIAN persons than among those who were Disabled. The average number of SNF days per person was 0.7 and 1.7, respectively, for IHS AIAN Disabled and Aged persons.

Inpatient hospital utilization by Disabled IHS AIAN and Disabled non-Hispanic white persons was fairly similar. The average number of inpatient hospital days was 2.2 and 2.1 days per person, respectively, for the IHS AIAN and the non-Hispanic white enrollees. They had similar utilization rates for SNF as well.

Inpatient utilization rates for Aged enrollees differed between the two populations. The average number of inpatient hospital days was approximately 20% higher among IHS AIAN. The average number of inpatient days for Aged IHS AIAN was 2.1 per person, while that for Aged non-Hispanic white enrollees was 1.6 days. SNF utilization by Aged IHS AIAN and Aged non-Hispanic white enrollees was fairly similar. Among Aged IHS AIAN, the average number of SNF days was 1.7 per person. Among non-Hispanic white enrollees, the average was 1.9 days.

6.3. Inpatient Utilization for the ESRD Eligibility Category

Inpatient utilization was highest among those with ESRD. As expected, inpatient utilization among IHS AIAN with ESRD was higher than that for IHS AIAN Disabled or Aged persons. The ESRD hospital admission rate was 1.7 per person, and those patients averaged 10.0 days in the hospital during 2010. The admission rate to SNF was also higher among IHS AIAN with ESRD.

The hospital admission rate for non-Hispanic white persons with ESRD was similar to that for IHS AIAN with ESRD. The ESRD hospital admission rate was 1.7 per person for non-Hispanic white enrollees; they averaged 11.1 days in the hospital—a somewhat higher rate that than for IHS AIAN with ESRD.

IHS AIAN with ESRD had lower use of SNF services than did Non-Hispanic white enrollees with ESRD. IHS AIAN SNF utilization, as measured by days, was 0.6 that of the non-Hispanic white enrollees. The average number of days of service was 4.8 and 7.4 per person, respectively, for IHS AIAN and non-Hispanic white enrollees with ESRD.

6.4. IHS AIAN Inpatient Utilization by IHS Area

Across all IHS Areas, inpatient utilization by IHS AIAN was higher than that for non-Hispanic white enrollees. The inpatient utilization data for all eligibility categories were used to calculate the average number of inpatient days spent in acute and non-acute hospitals by IHS AIAN and non-Hispanic white enrollees by IHS Area. See Figure 6.1. The average number of inpatient days among IHS AIAN in all IHS Areas was 2.4 per person, as reported in Table 6.1.b. Among IHS AIAN, average inpatient utilization ranged from 1.8 days to over 3.0 days. IHS AIAN utilization in two IHS Areas (California and Portland) averaged 1.8 days. In six IHS Areas, IHS AIAN utilization averaged 2.6 days or greater.

When data for high cost/use patients were excluded from the analysis, utilization differences across the IHS Areas were moderated; IHS AIAN utilization was lower than 2.6 days in all IHS Areas. In all IHS Areas, utilization by IHS AIAN remained higher than that for the non-Hispanic whites. See Appendix C, Figure C.1.b.

Figure 6.1. Average number of inpatient days in acute and non-acute hospitals among IHS AIAN and non-Hispanic white enrollees by IHS Area. 2010.

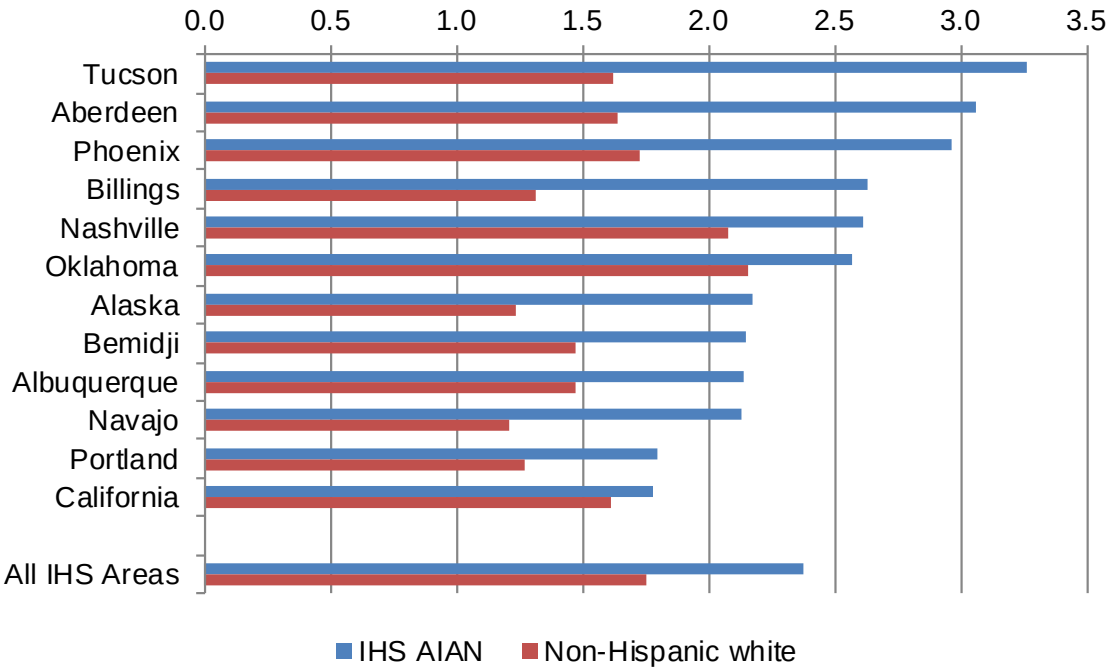


Table 6.1.a. Number of admissions and days of stay in inpatient facilities for IHS AIAN and non-Hispanic white Medicare enrollees who lived in an IHS Area. 2010.

	Number of services per person							
	IHS AIAN				Non-Hispanic white			
	Disabled	Aged	ESRD	All persons	Disabled	Aged	ESRD	All persons
Acute short-stay hospitals								
Admissions	11,936	31,869	6,722	50,527	259,187	1,505,134	65,998	1,830,319
Days	53,822	144,666	35,522	234,010	1,163,312	6,768,985	380,505	8,312,802
Readmissions [a]	2,209	5,246	1,813	9,268	46,266	227,589	19,281	293,136
Non-acute hospitals [b]								
Admissions	1,549	1,769	303	3,621	54,015	91,295	3,395	148,705
Days	20,144	28,631	6,430	55,205	622,849	1,358,494	63,423	2,044,766
All hospitals								
Admissions	13,485	33,638	7,025	54,148	313,202	1,596,429	69,393	1,979,024
Days	73,966	173,297	41,952	289,215	1,786,161	8,127,479	443,928	10,357,568
Skilled nursing facilities								
Admissions	972	5,431	828	7,231	28,792	389,952	12,774	431,518
Days	22,632	142,689	19,994	185,315	706,753	9,760,191	297,308	10,764,252

[a] A readmission is defined as a new admission that occurred within 30 days of a previous admission's discharge date.

[b] Non-acute hospitals include long-term care, psychiatric, rehabilitation, and children's hospitals.

Table 6.1.b. Average number of admissions and days of stay per person in inpatient facilities for IHS AIAN and non-Hispanic white Medicare enrollees who lived in an IHS Area. 2010.

	Average number of services per person							
	IHS AIAN				Non-Hispanic white			
	Disabled	Aged	ESRD	All persons	Disabled	Aged	ESRD	All persons
Acute short-stay hospitals								
Admissions	0.4	0.4	1.6	0.4	0.3	0.3	1.7	0.3
Days	1.6	1.7	8.5	1.9	1.3	1.4	9.5	1.4
Readmissions [a]	18.5%	16.5%	27.0%	18.3%	17.9%	15.1%	29.2%	16.0%
Non-acute hospitals [b]								
Admissions	0.05	0.02	0.07	0.03	0.06	0.02	0.08	0.03
Days	0.6	0.3	1.5	0.5	0.7	0.3	1.6	0.3
All hospitals								
Admissions	0.4	0.4	1.7	0.4	0.4	0.3	1.7	0.3
Days	2.2	2.1	10.0	2.4	2.1	1.6	11.1	1.8
Skilled nursing facilities								
Admissions	0.03	0.06	0.20	0.06	0.03	0.08	0.32	0.07
Days	0.7	1.7	4.8	1.5	0.8	1.9	7.4	1.8

[a] A readmission is defined as a new admission that occurred within 30 days of a previous admission's discharge date.

[b] Non-acute hospitals include long-term care, psychiatric, rehabilitation, and children's hospitals.

6.5. Outpatient Utilization—All Eligibility Categories

Utilization of nine different types of services during 2010 is described in Table 6.2.b. Although the summary information in the data file for six of these services is valuable for understanding utilization patterns, the summary information for three types of services is less suitable. Consequently, we highlight findings for the six services with interpretable results, and note the need to use more detailed service-specific data to understand utilization patterns of the other services.

IHS AIAN had higher use of emergency department services than non-Hispanic white enrollees. See Table 6.2.b. Among IHS AIAN, the average number of emergency department visits that did not result in a hospital stay was 0.6 visits per person, 1.4 times that for non-Hispanic white enrollees. The average number of visits among non-Hispanic white enrollees was 0.4 visits per person.

The findings in Table 6.2.b indicate that IHS AIAN had lower use of *physician, physician assistant, and nurse practitioner office/clinic* visits for evaluation and management services (that is, a typical office visit),[k] and higher use of hospital outpatient services than non-Hispanic white enrollees. However, it is not possible to draw conclusions about these utilization differences due to how the variables are defined in the data set analyzed for this report. The number of reported physician, physician assistant, and nurse practitioner office/clinic visits excludes visits that occurred at Federally Qualified Health Centers (FQHC) and Rural Health Clinics, as these visits are likely to be counted as hospital outpatient visits due to Medicare reimbursement for the visits at these facilities. See Appendix A. This underreporting of physician, physician assistant, and nurse practitioner office/clinic visits may have a greater influence on the utilization rate for IHS AIAN than non-Hispanic white enrollees, since IHS AIAN may be more likely to use FQHC and Rural Health Clinic services due to household income (higher enrollment in Medicaid) and location (living in rural areas).

Medicare reimbursement also influences the number of reported hospital outpatient visits in the data, and most likely contributes to the higher rate of hospital outpatient visits by IHS AIAN. For example, physician, physician assistant, and nurse practitioner office/clinic visits occur in different settings. Due to differences in Medicare reimbursement by setting, a visit may be classified as 1) a physician, physician assistant, and nurse practitioner office/clinic visit; 2) a hospital outpatient visit; or 3) both types of visits. Below are three examples of how Medicare reimbursement influences how visits are classified in the data.

> Setting 1: I/T medical clinics that are not FQHC, Rural Health Clinics, or associated with a hospital bill Medicare for physician, physician assistant, and nurse practitioner office/clinic visits using a Medicare claim form for professional services (CMS-1500 or 837P), similar to a private physician's office. In the data, such visits are reported as physician, physician assistant, and nurse practitioner office/clinic visits. These visits would not be counted as hospital outpatient visits.
>
> Setting 2: An I/T FQHC or Rural Health Clinic bills Medicare for physician, physician assistant, and nurse practitioner office/clinic visits using a Medicare claim form for facility costs (CMS-1450/UB-04, formerly known as the UB-82 and UB-92) to obtain reimbursement based on an all-inclusive payment rate. The all-inclusive rate is based on the costs associated with providing professional services by physicians, physician assistants, and nurse practitioners; laboratory and imaging services; other services; and other facility costs. Such visits are counted as hospital outpatient visits, not physician, physician assistant, and nurse practitioner office/clinic visits, due to the type of claim.
>
> Setting 3: If a physician, physician assistant, and nurse practitioner office/clinic visit occurred at an I/T hospital outpatient clinic, the hospital bills Medicare for professional services provided by the physician, physician assistant, or nurse practitioner using the Medicare claim form for professional services. The hospital also bills Medicare for facility costs associated with the visit to obtain reimbursement based on an all-inclusive payment rate. In this setting, the all-inclusive rate includes costs associated with

[k] Physician, physician assistant, and nurse practitioner office/clinic visits for evaluation and management are visits during which a health assessment, clinical impression, or diagnosis is made with a resulting plan of care. Visits conducted to provide specific medical procedures are not included in this utilization category.

laboratoryand imaging services, other services, and other facility costs; it does not include professional service costs. Due to the claim for professional services, the visit is counted as a physician, physician assistant, and nurse practitioner office/clinic visit. Due to the claim for facility costs, the visit is also counted as a hospital outpatient visit.

Since IHS AIAN are more likely to see providers in hospital outpatient clinics (that is, Setting 3) than are non-Hispanic white enrollees, the hospital outpatient utilization rate for IHS AIAN may be higher than that for non-Hispanic white enrollees when calculated using these summary data. Consequently, it is necessary to analyze service-specific data, rather than summary data, to understand utilization of physician, physician assistant, and nurse practitioner office/clinic services—services that facilitate early diagnosis and treatment of acute and chronic conditions.

Other physician, physician assistant, and nurse practitioner visits for evaluation and management include services provided in the emergency department, at an inpatient setting such as a hospital or SNF, and at home. IHS AIAN persons averaged 5.7 such visits. Utilization of these services by non-Hispanic white enrollees was similar (5.8 visits per person). As this category of service use includes many different types of services, it is difficult to draw conclusions from these findings.

Utilization of services at ambulatory surgery centers was similar for IHS AIAN and non-Hispanic white enrollees. Each unit of utilization represents a unique ambulatory surgery procedure, rather than a visit to an ambulatory surgery center. IHS AIAN had, on average, 0.2 procedures during the year; this rate is the same as that of non-Hispanic white enrollees.

Utilization of prescribed medications, as measured by the number dispensed, was higher among IHS AIAN than non-Hispanic white enrollees. The mean number of prescriptions dispensed was 29.1 among all IHS AIAN and 25.8 among all non-Hispanic white enrollees. Differences in use of prescribed medications existed across the three eligibility categories. Among the Aged, IHS AIAN had higher utilization. However, IHS AIAN who were Disabled or had ESRD eligibility had lower use of prescribed medications than non-Hispanic white enrollees.

DME utilization among IHS AIAN was lower than that for non-Hispanic white enrollees for each eligibility category. Average DME utilization, as measured by the average number of units provided per person, was lower for IHS AIAN in each eligibility category even though utilization was similar between the IHS AIAN and non-Hispanic white enrollees when data for all three eligibility categories were combined. Since a larger percentage of IHS AIAN were Disabled or had ESRD, and DME use was higher in these eligibility categories, the resulting IHS AIAN average rate for all eligibility categories was similar to the non-Hispanic white rate for all eligibility categories.

IHS AIAN had, on average, 3.8 home health visits per person. Average utilization among non-Hispanic white persons was lower; they averaged 3.3 visits per person. Access to such services is an important component of the continuum of care for patients who have chronic conditions or who required assistance after a hospital or SNF discharge.

Hospice use among IHS AIAN was lower than among the reference population. Among IHS AIAN, the average number of days that hospice services were provided was 1.3 per person. The rate among non-Hispanic white persons was 1.6 times higher than that for the IHS AIAN (2.0 days per person).

6.6. Outpatient Utilization by Disabled and Aged Enrollees

Enrollees who were eligible for Medicare by means of disability and those who were Aged exhibited common utilization patterns in both populations, although there were differences between the IHS AIAN and non-Hispanic white enrollee actual rates. Enrollees who were Disabled had higher use of emergency department, prescribed medication, and durable medical equipment services than Aged enrollees. In contrast, Aged enrollees were more likely to use home health and hospice services than Disabled enrollees. Below is additional information on selected services.

Enrollees who were Disabled had higher use of emergency department services than persons who were Aged in both populations. Among IHS AIAN, the average number of emergency department visits for the Disabled and Aged were 1.0 and 0.4 per person, respectively. Non-Hispanic white persons who were Disabled also had higher use of emergency department services than those who were Aged. The utilization rates for Disabled and Aged persons were 0.9 and 0.3, respectively.

Aged persons in both populations had higher use of home health services than persons who were Disabled. Among IHS AIAN, the average number of home health visits for the Disabled and Aged was 2.4 and 4.2, respectively. Although the home health utilization rate among non-Hispanic white Disabled and Aged persons was lower than that for IHS AIAN, the trend of higher use among the Aged was also observed (2.2 and 3.4 visits, respectively, for Disabled and Aged non-Hispanic white enrollees).

Utilization of hospice services was higher among the Aged than among persons who were Disabled in both populations. Among IHS AIAN and non-Hispanic white enrollees who were Disabled, the number of days hospice services were provided averaged 0.6 per person. Among the Aged, utilization by the reference population was 1.4 times higher. The average number of days of service was 1.6 and 2.3 per person, respectively, for Aged IHS AIAN and Aged non-Hispanic white enrollees.

6.7. Outpatient Utilization for ESRD Enrollees

Similar to use of inpatient services, persons with ESRD eligibility had higher use of outpatient services than enrollees who were Disabled or Aged in both populations, and utilization differences existed between IHS AIAN and non-Hispanic white enrollees. Among IHS AIAN persons with ESRD eligibility, the average number of emergency department and home health visits was 1.4 and 6.9 visits per person, respectively. Among non-Hispanic white persons with ESRD eligibility, utilization of emergency department services was somewhat lower (1.2 visits per person); use of home health visits was higher (10.7 visits per person). Non-Hispanic white enrollees with ESRD eligibility also had higher use of hospice services. The average number of days that hospice services were provided was 0.9 and 1.4 per person, respectively, for IHS AIAN and non-Hispanic white enrollees with ESRD eligibility. The average number of dispensed prescribed medications was similar in both populations.

Table 6.2.a. Information on selected outpatient services for IHS AIAN and non-Hispanic white Medicare enrollees who lived in an IHS area. 2010.

Service	IHS AIAN				Non-Hispanic white			
	Disabled	Aged	ESRD	All persons	Disabled	Aged	ESRD	All persons
	Number (000s)	Number (000s)	Number (000s)	Number (000s)	Number (000s)	Number (000s)	Number (000s)	Number (000s)
Emergency department visit [a]	32	36	6	73	736	1,706	50	2,492
Physician, physician assistant, and nurse practitioner office/clinic visit for evaluation and management [b]	192	509	32	732	5,407	37,178	382	42,966
Hospital outpatient visit [c]	290	688	573	1,551	5,985	28,676	4,779	39,441
Other physician, physician assistant, and nurse practitioner visit for evaluation and management [d]	187	409	98	694	5,907	27,229	1,146	34,282
Ambulatory surgery center procedure [e]	4	15	1	20	131	1,288	8	1,427
Prescribed medication [f]	1,251	2,099	182	3,532	34,508	116,519	1,791	152,818
Durable medical equipment [g]	99	202	26	327	2,926	12,895	292	16,113
Home health visit	81	356	29	465	1,942	16,964	426	19,333
Hospice								
Stay [h]	0.2	1.7	0.1	2.1	7.2	142.3	2.5	152.0
Service day	19	131	4	154	513	11,294	57	11,864

The majority of summary service categories listed in the table include only data for outpatient services. However, some of the summary service categories (such as hospice) include data for inpatient services, as described below.

[a] Emergency department visits are an emergency department visits that did not result in an admission.

[b] Office/clinic visits for evaluation and management are typical office visits and include those conducted by other medical personnel who provide similar services (for example, a nurse midwife). Evaluation and management services may be provided by primary care and specialty providers. Evaluation and management visits conducted in other settings (such as in a hospital or an emergency department) and visits conducted to obtain specific procedures are included in other service categories.

[c] Hospital outpatient visits include outpatient visits conducted by physicians, physician assistants, nurse practitioners, and other providers if the service was provided in an outpatient hospital clinic, a Federally Qualified Health Center, or a Rural Health Clinic.

[d] Other physician, physician assistant, nurse practitioner visits conducted for evaluation and management include those that took place in an hospital emergency department, an inpatient setting, and at home. They include those conducted by other medical personnel who provide similar services (for example, a nurse midwife).

[e] Ambulatory surgery center procedures are the number of unique ambulatory surgery procedures provided in an ambulatory surgery center.

[f] Prescribed medications are the number of dispensed prescribed medications covered by Part D.

[g] Durable medical equipment is the number of units of equipment, devices, and supplies.

[h] A hospice stay indicates a person obtained hospice services regardless of location (such as inpatient or at home).

Table 6.2.b. Information on selected outpatient services for IHS AIAN and non-Hispanic white Medicare enrollees who lived in an IHS area. 2010.

Service	IHS AIAN				Non-Hispanic white			
	Disabled	Aged	ESRD	All persons	Disabled	Aged	ESRD	All persons
	Average number per person	Average number per person	Average number per person	Average number per person	Average number per person	Average number per person	Average number per person	Average number per person
Emergency department visit [a]	1.0	0.4	1.4	0.6	0.9	0.3	1.2	0.4
Physician, physician assistant, and nurse practitioner office/clinic visit for evaluation and management [b]	5.8	6.0	7.5	6.0	6.3	7.4	9.5	7.3
Hospital outpatient visit [c]	8.8	8.2	137.2	12.8	6.9	5.7	119.6	6.7
Other physician, physician assistant, and nurse practitioner visit for evaluation and management [d]	5.7	4.9	23.4	5.7	6.8	5.4	28.7	5.8
Ambulatory surgery center procedure [e]	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2
Prescribed medication [f]	37.9	25.0	43.6	29.1	39.9	23.3	44.8	25.8
Durable medical equipment [g]	3.0	2.4	6.1	2.7	3.4	2.6	7.3	2.7
Home health visit	2.4	4.2	6.9	3.8	2.2	3.4	10.7	3.3
Hospice								
Stay [h]	0.01	0.02	0.03	0.02	0.01	0.03	0.06	0.03
Service day	0.6	1.6	0.9	1.3	0.6	2.3	1.4	2.0

The majority of summary service categories listed in the table include only data for outpatient services. However, some of the summary service categories (such as hospice) include data for inpatient services, as described below.

[a] Emergency department visits are an emergency department visits that did not result in an admission.

[b] Office/clinic visits for evaluation and management are typical office visits and include those conducted by other medical personnel who provide similar services (for example, a nurse midwife). Evaluation and management services may be provided by primary care and specialty providers. Evaluation and management visits conducted in other settings (such as in a hospital or an emergency department) and visits conducted to obtain specific procedures are included in other service categories.

[c] Hospital outpatient visits include outpatient visits conducted by physicians, physician assistants, nurse practitioners, and other providers if the service was provided in an outpatient hospital clinic, a Federally Qualified Health Center, or a Rural Health Clinic.

[d] Other physician, physician assistant, nurse practitioner visits conducted for evaluation and management include those that took place in an hospital emergency department, an inpatient setting, and at home. They include those conducted by other medical personnel who provide similar services (for example, a nurse midwife).

[e] Ambulatory surgery center procedures are the number of unique ambulatory surgery procedures provided in an ambulatory surgery center.

[f] Prescribed medications are the number of dispensed prescribed medications covered by Part D.

[g] Durable medical equipment is the number of units of equipment, devices, and supplies.

[h] A hospice stay indicates a person obtained hospice services regardless of location (such as inpatient or at home).

6.8. IHS AIAN Outpatient Utilization by IHS Area

Data for all eligibility categories were combined to examine utilization of emergency department; physician, physician assistant, and nurse practitioner office/clinic; and home health visits during 2010 by IHS Area. See Figures 6.2 - 6.4. The figures describing utilization of emergency department services and physician, physician assistant, and nurse practitioner services for evaluation and management are depicted with the IHS Areas having highest IHS AIAN utilization at the top of the figure. Similar to emergency department utilization findings for IHS AIAN and non-Hispanic white enrollees who lived in IHS Areas, the Area-specific findings in Figure 6.2 showed that the trend of higher utilization among IHS AIAN persisted across nearly all IHS Areas. In two Areas (Alaska and Navajo), emergency department utilization among non-Hispanic white enrollees was higher.

Conversely, IHS AIAN had lower utilization of physician, physician assistant, and nurse practitioner office/clinic services than non-Hispanic white enrollees in most IHS Areas. However, office/clinic utilization was similar in two Areas (Oklahoma and Billings) and higher among IHS AIAN in two Areas (Bemidji and Navajo). As noted above, it is not possible to draw conclusions about these differences, as they may be due in part to differences in Medicare reimbursement that influence how this utilization variable was constructed.

Information on home health utilization is presented by level of use in Figure 6.4 in order to depict the percentage of enrollees who did not use home health services, and utilization among those that did. For this figure, IHS Areas having the lowest IHS AIAN utilization are at the top of the figure. The percentage of IHS AIAN and non-Hispanic white enrollees who did not use home health services was similar (92.0% and 90.8%, respectively). In six IHS Areas, the percentage of IHS AIAN who had no home health utilization was greater than 95%. Among the non-Hispanic white enrollees, there was only one IHS Area for which the percentage with no home health utilization was greater than 95%. Utilization of home health services, as determined by the percentage of persons who had one or more visits, was higher in Oklahoma than in other IHS Areas by both IHS AIAN and non-Hispanic white enrollees. Within the Oklahoma Area, utilization was higher among the IHS AIAN than among the non-Hispanic white enrollees (16.1% and 13.3%, respectively).

Figure 6.2. Average number of emergency department visits per person among IHS AIAN and non-Hispanic white enrollees by IHS Area. 2010.

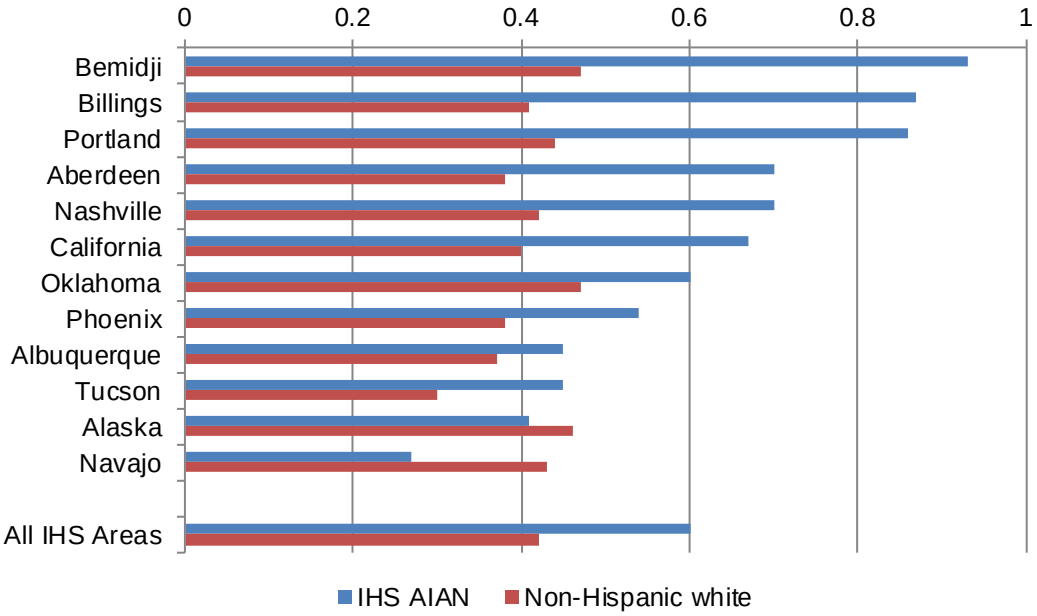


Figure 6.3. Average number of physician, physician assistant, and nurse practitioner office/clinic visits per person among IHS AIAN and non-Hispanic white enrollees by IHS Area. 2010.

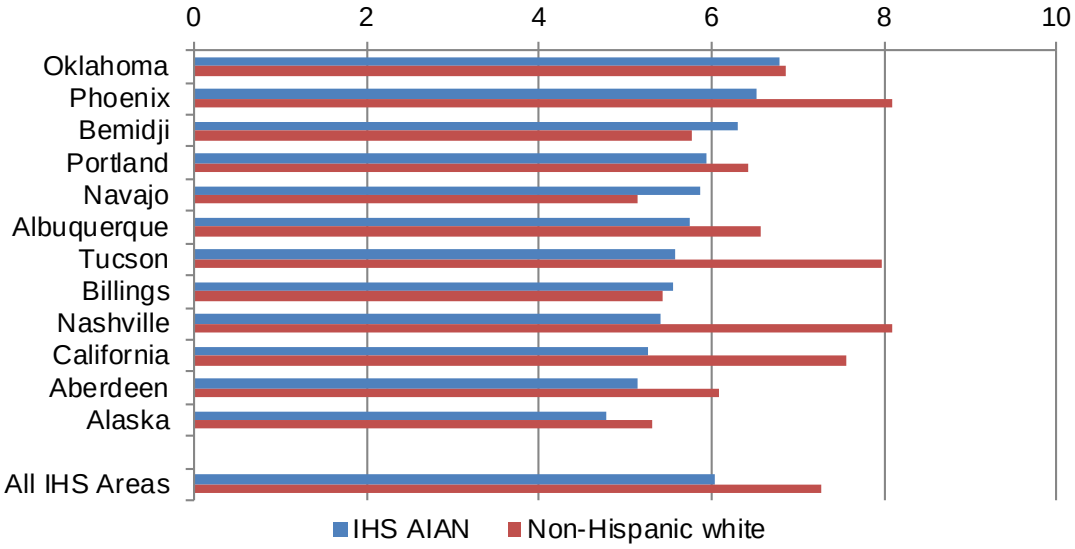
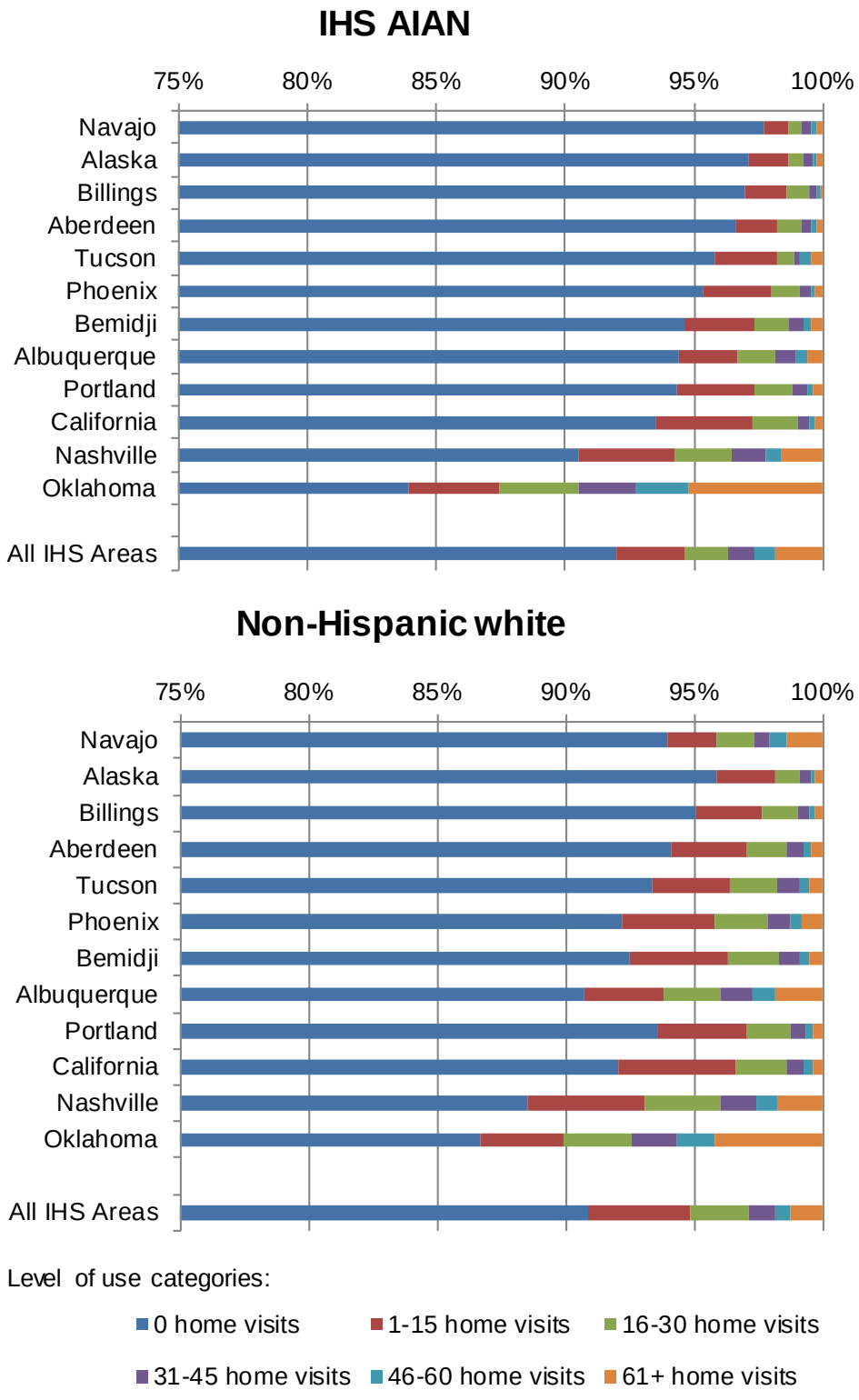


Figure 6.4. Home health utilization by level of use among IHS AIAN and non-Hispanic white enrollees by IHS Area. 2010.



7. Payments for Services

Similar to findings on health service utilization, we present 2010 payment information for provided services for IHS AIAN and non-Hispanic white enrollees who:

1. Lived in an IHS Area and
2. Had continuous FFS coverage.

Payments are classified into two categories: Medicare and Other payments. Other payments include coinsurance and deductibles for Medicare covered services made by enrollees and other types of healthcare coverage they may have (such as private supplemental insurance or Medicaid). We first report on these two types of payments in Tables 7.1-7.3. Second, we examine Total payments—the sum of Medicare and Other payments—in more depth by providing Total payment results by eligibility category (Disabled, Aged, ESRD) for Part A, B, and D covered services. See Tables 7.4-7.6.

Similar to the utilization differences described in Section 6, it is not possible to fully understand reasons for any identified differences in payments between IHS AIAN and non-Hispanic white enrollees without conducting detailed statistical analyses to understand how factors such as age; health status; Medicaid enrollment; Part B and D coverage; geographic location (such as rural location); and variation in practice patterns, payments for specific services, service utilization, provider network costs, and other factors contribute to those differences. This is true for reported payment differences between IHS AIAN and non-Hispanic white enrollees and for differences across IHS Areas.

7.1. Total Payments are the Sum of Medicare and Other Payments

Average Medicare, Other, and Total payments were higher for IHS AIAN than for the reference population. The average Total payment per person for IHS AIAN in all eligibility categories in 2010 was $15,021. For non-Hispanic white enrollees the average Total payment was $12,261. See Table 7.1.

Medicare payments comprised comparable percentages of Total Payments for IHS AIAN and the reference population (82.7% and 82.4%, respectively). Thus, payments from other sources accounted for comparable percentages as well (17.3% and 17.6%, respectively). Due to the higher percentage of IHS AIAN who were dually enrolled in Medicaid, compared to the reference population, it is likely that more of the Other payments were made by Medicaid among the IHS AIAN.

Table 7.1. Average payments for Parts A, B, and D services for IHS AIAN and non-Hispanic white Medicare enrollees, who lived in an IHS Area. 2010.

Payment type	IHS AIAN		Non-Hispanic white	
	Average payment	Percent	Average payment	Percent
Medicare payments	$12,421	82.7%	$10,108	82.4%
Other payments [a]	$2,599	17.3%	$2,154	17.6%
Total payments	$15,021	100.0%	$12,261	100.0%

[a] Other payments include coinsurance and deductible payments for Medicare covered services made by the enrollees and other types of health coverage they may have (such as private coverage, Medicaid).

Medicare cost-sharing (deductibles and coinsurance) varied across Medicare Parts A, B and D covered services. Table 7.2 provides payment information, similar to Table 7.1, with the payment data stratified by Medicare coverage type (Part A, B, and/or D). Average payments from sources other than Medicare (Other payments) varied by coverage type. For both populations, they were less than 8% for Part A covered services and approximately 22% for Part B covered services. Payments from other sources for Part B covered services were over $1,000 for both populations.

Other payments represented one-third of Total payments for Part D (prescribed medications) services. It is important to note that Table 7.2 payment findings for Part D, include those for persons *with* and *without* Part D coverage. For this reason, we present Part D payment information for persons *with* 12 months of Part D coverage in Table 7.3. Among the IHS AIAN with *continuous FFS coverage* in 2010, 39.5% had 12 months of Part D coverage.[l] This compares to 34.9% among the non-Hispanic white population.

Other payments were approximately $1,300 per person for those with Part D coverage for prescribed medications. Among those with 12 months of Part D coverage, average payments for Part D covered services among IHS AIAN and non-Hispanic white enrollees were similar ($3,879 and $3,835, respectively), as were Other payments. See Table 7.3. Similar to findings in Table 7.2, Other payments accounted for approximately one-third of Total payments.

[l] Note that Part D coverage findings presented in *Section III, 4.3* differ somewhat from the Part D coverage findings presented here due to differences in the populations analyzed. The information in Section III, 4.3 is for enrollees who had 12 months of Part A coverage. In this section, we present findings for persons with continuous FFS coverage.

Table 7.2. Average payments for Parts A, B, and D services for IHS AIAN and non-Hispanic white Medicare enrollees who lived in an IHS Area. 2010.

Payment type	IHS AIAN				Non-Hispanic white			
	Part A (Inpatient)	Part B (Outpatient & DME)	Part D (Prescription Drug)	Total	Part A (Inpatient)	Part B (Outpatient & DME)	Part D (Prescription Drug)	Total
Medicare payments								
Average payment	$6,047	$4,914	$1,461	$12,421	$4,955	$3,981	$1,172	$10,108
Percent (column)	92.8%	77.9%	66.5%	82.7%	92.4%	77.8%	65.6%	82.4%
Other payments [a]								
Average payment	$468	$1,395	$737	$2,599	$406	$1,134	$614	$2,154
Percent (column)	7.2%	22.1%	33.5%	17.3%	7.6%	22.2%	34.4%	17.6%
Total payments								
Average payment	$6,514	$6,309	$2,198	$15,021	$5,361	$5,115	$1,786	$12,261
Percent (column)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

[a] Other payments include Medicare coinsurance and deductible payments for covered services made by Medicare enrollees and by other types of health coverage they may have (such as private coverage, Medicaid).

Table 7.3. Average payments for IHS AIAN and non Hispanic white Medicare enrollees, who had 12 months Part D coverage and lived in an IHS Area. 2010.

	IHS AIAN		Non Hispanic white	
Percent of people with 12 months Part D coverage	39.5%		34.9%	
Payment type	Average Part D payment for persons with 12 months of Part D coverage			
	IHS AIAN		Non Hispanic white	
Medicare payments	$2,574	66.4%	$2,508	65.4%
Other payments [a]	$1,304	33.6%	$1,327	34.6%
Total payments	$3,879	100.0%	$3,835	100.0%

[a] Other payments include Medicare coinsurance and deductible payments for covered services made by Medicare enrollees and by other types of health coverage they may have (such as private coverage, Medicaid).

There is variation across the IHS Areas in the percentage of Total payments for all covered services paid for by sources other than Medicare. See Figure 7.1. The percentage of Total payments paid by sources other than Medicare ranged from 15.2% in Alaska to 19.1% in Bemidji among IHS AIAN. When findings for IHS AIAN were compared to those for non-Hispanic white enrollees in the same IHS Area, the percentage of payments from other sources was lower among the IHS AIAN in seven areas and higher in five. A number of factors, such as differences in health status, service utilization, and other types of healthcare coverage, influence the observed variation across IHS Areas. Among IHS AIAN with no form of health coverage other than Medicare, Contract Health Service funds can be used to pay Medicare-required coinsurance and deductibles for those who qualify for Contract Health Services.

Across all IHS Areas, the average Total payment for IHS AIAN was higher than that for non-Hispanic white enrollees. See Figure 7.2. The average Total payment for IHS AIAN in seven IHS Areas was greater than $15,000 per person. Among the non-Hispanic white enrollees, the highest average payment per person was $13,441 in Nashville. Only two other IHS Areas had non-Hispanic white average payments higher than $12,000.

The magnitude of the IHS AIAN and non-Hispanic white differences varied by IHS Area. The differences were smallest in Nashville, California, and Oklahoma. In Tucson, Phoenix, Aberdeen, and Billings, average payments for IHS AIAN were 1.5 times or more higher than those for non-Hispanic white enrollees. When data for high cost/use patients were excluded from the analyses, the differences in average Total payment, compared to the average when their data were included, were largest for Alaska and California. Within these areas, payment differences between IHS AIAN and non-Hispanic white enrollees remained similar to the differences presented in Figure 7.2, which included data for the high cost/use patients.

Figure 7.1. The percent of Total payments accounted for by Other payments among IHS AIAN and non-Hispanic white enrollees by IHS Area. 2010.

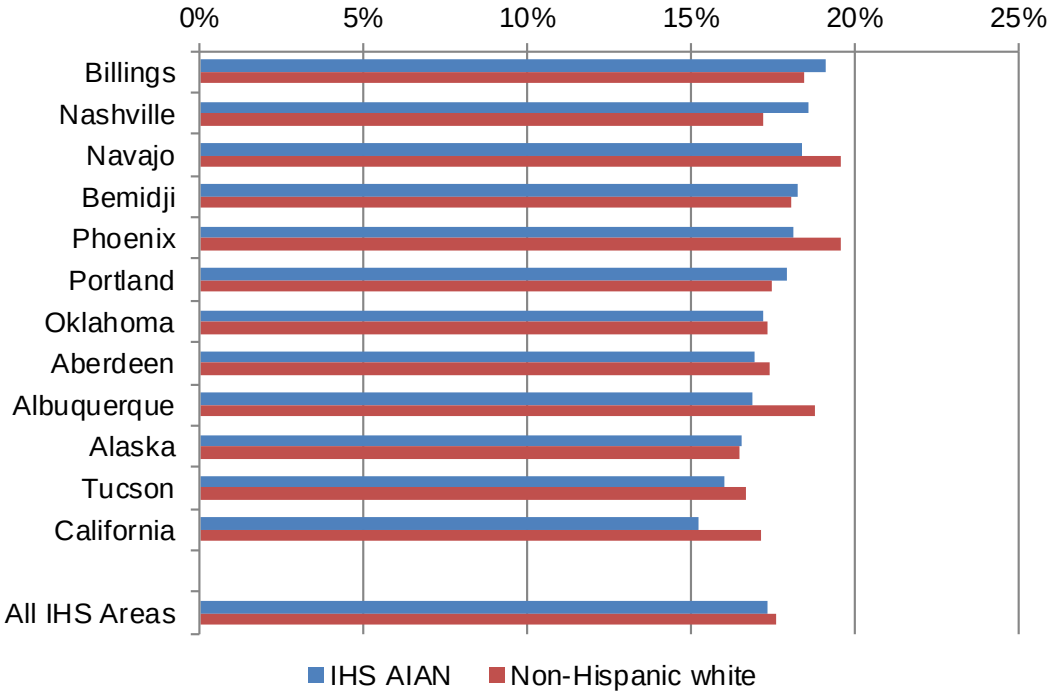
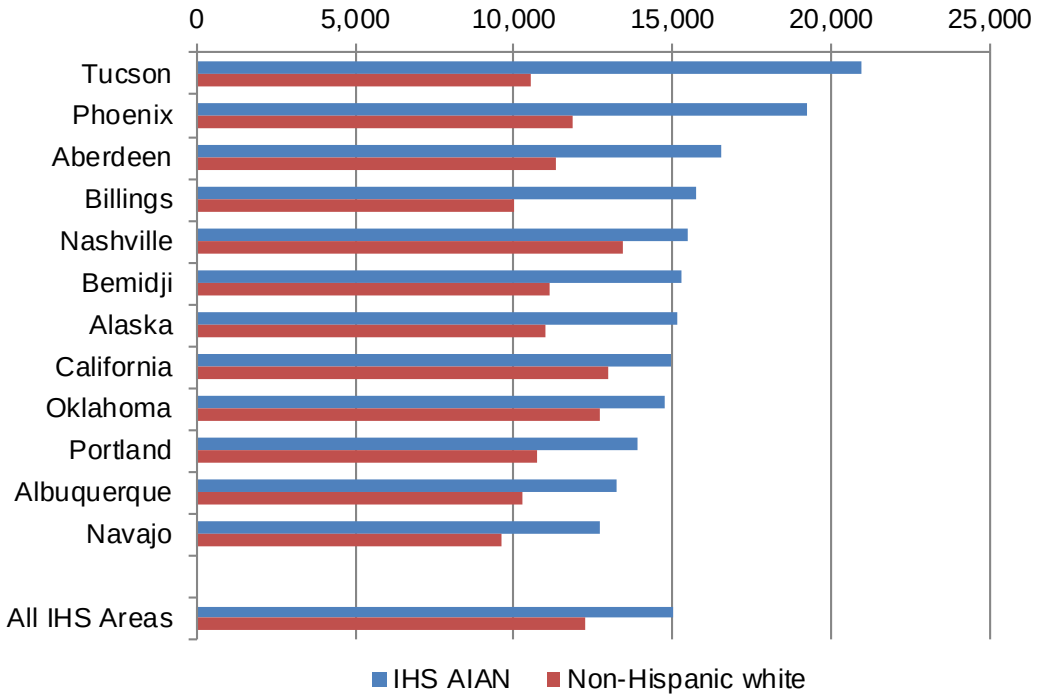


Figure 7.2. Average Total payment per person for IHS AIAN and non-Hispanic white enrollees by IHS Area. 2010.



While Figure 7.2 provides average Total payment, Figure 7.3 provides information on the distribution of Total payments across the Medicare enrollees. While the percentage of IHS AIAN with Total payments less than $2,000 did not appear to vary substantially across IHS Areas, the percentage with payments greater than $12,000 did.

Payment variations by IHS Area, and between the IHS AIAN and non-Hispanic white enrollees in the same area, may be due to many different factors, as noted above. It is not possible to comment on the relative contribution of each to the payment differences depicted in Figures 7.1-7.3 without more detailed statistical analyses.

7.2. Total Payments by Eligibility Category

Payment information for Part A, B, and D covered services by eligibility category (Disabled, Aged, and ESRD) is provided in Table 7.4.

The average Total payment for Aged IHS AIAN was higher than the average for non-Hispanic white Aged enrollees. The average Total payment was $12,411 per person for Aged IHS AIAN and $11,442 for Aged enrollees in the reference population, a difference of approximately $1,000.

Among Disabled enrollees, average Total payments were similar for IHS AIAN and non-Hispanic white enrollees. In both populations, the average Total payment per person was approximately $14,000.

Among those with ESRD eligibility, the average Total payment for IHS AIAN was lower. The average Total payment was $76,146 per person for IHS AIAN with ESRD. The average payment was approximately $1,000 higher per person among the non-Hispanic white enrollees with ESRD ($77,377).

7.3. Payments for Part A, B, and D Covered Services

Table 7.4 provides information on the percentage of Total payments for Part A, B, and D covered services by eligibility category. Utilization patterns, described in Section 6, contribute to payment differences by eligibility category for Part A, B, and D covered services.

Nearly equal percentages of Total payments were for Part A and Part B covered services among the IHS AIAN and non-Hispanic white enrollees. Among IHS AIAN, 43.4% of Total payments were for Part A services and 42.0% were for services covered by Part B. This allocation was similar to that for non-Hispanic white enrollees, with 43.7% and 41.7%, respectively, of Total payments accounted for by Part A and B services.

There were some payment differences by coverage across eligibility categories. Part A payments were higher for Aged enrollees than for those who were Disabled or with ESRD in both populations. Part A payments as a percentage of Total payments were 48.4% and 46.4%, respectively, among Aged IHS AIAN and non-Hispanic white enrollees.

There was variation across the IHS Areas in the percentage of Total payments accounted for by Part A covered services. Among the IHS AIAN, the percentages ranged from just under 40% in two IHS Areas (Bemidji and Nashville) to over 45% in two other Areas (Oklahoma and Alaska). See Figure 7.4.

When the Part A percentage among IHS AIAN is compared to that for non-Hispanic whites, the percentage is higher in some IHS Areas and lower in others. The largest difference was observed in the Alaska Area, where IHS AIAN payments for Part A covered services were 1.2 times those for non-Hispanic white enrollees. Although a number of factors contribute to variation across IHS Areas, differences in health status, hospital inpatient utilization, and payment per admission likely account for some of the variation.

Figure 7.3. Distribution of Total payments among IHS AIAN and non-Hispanic white Medicare enrollees who lived in IHS Areas. The percentage of enrollees with different levels of Total payments. 2010.

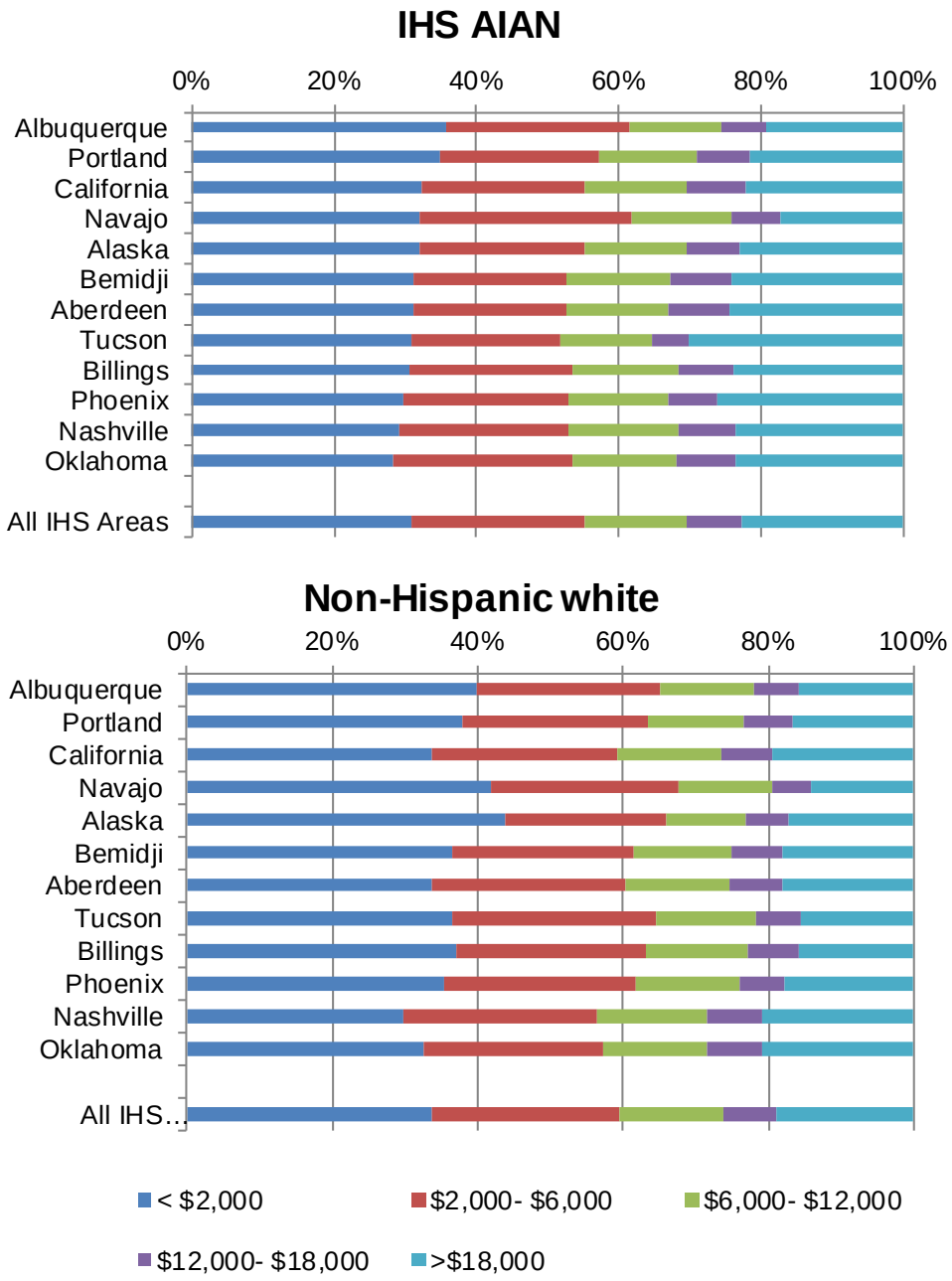
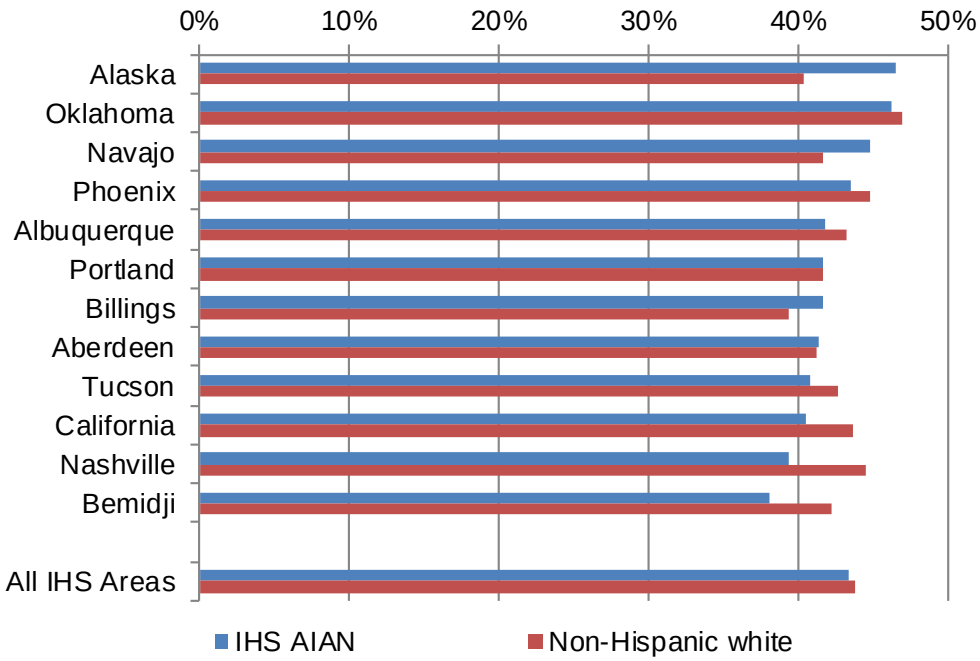


Table 7.4. Average Total payments[a] for IHS AIAN and non-Hispanic white Medicare enrollees who lived in an IHS Area. 2010.

Payment type	IHS AIAN				Non-Hispanic white			
	Disabled	Aged	ESRD	All persons	Disabled	Aged	ESRD	All persons
Part A								
Average payment	$5,085	$6,013	$27,918	$6,514	$4,512	$5,304	$30,854	$5,361
Percent (column)	36.5%	48.4%	36.7%	43.4%	32.2%	46.4%	39.9%	43.7%
Part B								
Average payment	$5,160	$4,921	$43,330	$6,309	$4,911	$4,859	$41,641	$5,115
Percent (column)	37.0%	39.6%	56.9%	42.0%	35.1%	42.5%	53.8%	41.7%
Part D								
Average payment	$3,689	$1,478	$4,898	$2,198	$4,576	$1,280	$4,883	$1,786
Percent (column)	26.5%	11.9%	6.4%	14.6%	32.7%	11.2%	6.3%	14.6%
Total								
Average payment	$13,933	$12,411	$76,146	$15,021	$13,999	$11,442	$77,377	$12,261
Percent (column)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

[a] Total payments include Medicare payments and other payments. Other payments include cost-sharing for deductibles and co-insurance for provided services, and are made by Medicare enrollees and by other types of health coverage they may have (such as private coverage, Medicaid).

Figure 7.4. The percent of Total payments accounted for by Part A payments among IHS AIAN and non-Hispanic white enrollees by IHS Area.



7.4. Total Payments for Specific Services Covered by Medicare Parts A and B

Tables 7.5.a and 7.5.b provide information on payments for Part A covered services, including inpatient hospital, SNF, home health, and hospice services. Table 7.5.a provides Total payments and Table 7.5.b provides average Total payment per person.

Tables 7.6.a and 7.6.b provide similar information for nine different types of services covered by Part B, including professional services (such as those provided by physicians, physician assistants, and nurse practitioners), hospital outpatient services, ancillary services (such as laboratory and imaging), durable medical equipment, and dialysis. Although the summary outpatient payment information is useful for understanding general trends, it is not possible to interpret payment findings for some services due to use of summary variables that include many different types of services, and the influence Medicare reimbursement has on which category payments were assigned. Consequently, we highlight findings for selected payment categories with interpretable results and note the need to use more detailed service-specific data to understand payments for other services.

The average Total payment for Part A services was higher among IHS AIAN. See Table 7.5.b. The average Total payment for Part A services among IHS AIAN was $6,514 per person; among non-Hispanic white enrollees, it was $5,361. Among the Disabled and Aged, IHS AIAN had higher average Total payment for Part A services than did non-Hispanic white enrollees in the same eligibility categories. However, IHS AIAN with ESRD eligibility had a lower average Total payment than did non-Hispanic white enrollees with ESRD eligibility.

Among IHS AIAN, a higher percentage of Part A payments were for hospital inpatient services. The vast majority of Part A payments were for hospital inpatient services. Nearly 80% of Part A payments for IHS AIAN were for hospital inpatient services; the percentage among non-Hispanic white enrollees was nearly 70%. Part A payments for inpatient hospital services were similar for IHS AIAN who were Disabled and Aged (nearly $4,500 per person). Part A payments for IHS AIAN with ESRD eligibility were approximately $25,000.

IHS AIAN had lower payments for SNF and hospice services than non-Hispanic white enrollees. The average payment for home health services was similar for IHS AIAN and non-Hispanic white enrollees. For example, the average Total payment for SNF was $715 among IHS AIAN; it was $884 among non-Hispanic white enrollees. These payment findings are very similar to the utilization findings presented in Section 6 for these services. Variations in average Total payment for these services by eligibility category were also similar to the utilization findings. In both populations, enrollees with ESRD eligibility had higher payments for SNF and home health services than did those who were Disabled or Aged. Differences in payments for hospice services by eligibility were not as large in both populations.

IHS AIAN had higher average payments for Part B services than did non-Hispanic white enrollees. See Table 7.6.b. The average Total payment for Part B services was $6,309 per person among IHS AIAN, and that for non-Hispanic white enrollees was $5,115 per person. Average Total payments for Part B services were of a similar magnitude to those for Part A services. Among the Disabled and Aged, IHS AIAN had slightly higher average Total payments for Part B services than did non-Hispanic white enrollees in the same eligibility categories. Among those with ESRD eligibility, IHS AIAN had a higher average Total payment than did non-Hispanic white enrollees; the difference between the two populations was greater for this eligibility category.

Similar to the utilization findings, IHS AIAN average Total payments for physician, physician assistant, and nurse practitioner office/clinic visits for evaluation and management were lower than those for non-Hispanic white enrollees, and payments for hospital outpatient services were greater. It is important to note that Medicare reimbursement varies by provider setting and influences how both utilization and payments for these services are classified in the summary data. Similar to the utilization findings for these services, it is not possible to interpret the payment results for these services. However, it is important to note that in both populations, payments for hospital outpatient services accounted for the largest percentage of Part B Total payments. Over half of Part B payments for IHS AIAN were for hospital outpatient visits; among non-Hispanic white enrollees, payments for hospital outpatient services accounted for approximately one-third of Part B payments.

IHS AIAN use of I/T hospital outpatient services, as well as use of FQHC and Rural Health Clinics, means that Medicare reimbursement for many outpatient services was classified as hospital outpatient payments. Furthermore, Medicare reimbursement in these provider settings is based on all-inclusive rates that account for costs associated with ancillary services such as laboratory and imaging services. Thus, it is not possible to interpret the average Total payment findings for these services either. For more information on reimbursement of these services, see Appendix A.

Average Total payments for services provided in ambulatory surgery centers and those for durable medical equipment did not vary substantially between the two populations. Average payment for dialysis services among those with ESRD eligibility was somewhat higher among the IHS AIAN than the non-Hispanic white enrollees (Total payment per person averaged $2,444 and $2,187, respectively).

Payments for *Other Part B covered services* accounted for nearly 20% of Part B payments among IHS AIAN and nearly 30% among non-Hispanic white enrollees. Other Part B covered services include Part B drugs, anesthesia, other medical procedures, and other types of covered services. Other medical procedures include a wide array of medical procedures such as cardiovascular, orthopedic, gastrointestinal, and optometric procedures. Other covered services include, but are not limited to, ambulance, chiropractor, chemotherapy, vision, hearing, and speech services. It is not possible to interpret the finding of lower average payment among IHS AIAN for this group of services, as the difference between the IHS AIAN and non-Hispanic white average payment may be due in part to differences in Medicare reimbursement for services by setting, as noted above. It is necessary to conduct analyses of detailed data for specific services and medical procedures to understand trends in payment for these services.

Table 7.5.a. Total payments for Part A services by eligibility type for IHS AIAN and non-Hispanic white Medicare enrollees who lived in an IHS Area. 2010.

Services	IHS AIAN				Non-Hispanic white			
	Disabled	Aged	ESRD	All persons	Disabled	Aged	ESRD	All persons
	Dollar (000s)	Dollar (000s)	Dollar (000s)	Dollar (000s)	Dollar (000s)	Dollar (000s)	Dollar (000s)	Dollar (000s)
Acute Inpatient	$121,497	$334,021	$93,738	$549,256	$2,600,138	$15,695,750	$927,984	$19,223,872
Non-acute hospitals [a]	$21,471	$36,354	$9,755	$67,581	$589,225	$1,704,937	$97,742	$2,391,904
All hospitals	$142,968	$370,375	$103,494	$616,837	$3,189,363	$17,400,687	$1,025,726	$21,615,776
Skilled Nursing Facility	$10,773	$67,520	$8,428	$86,721	$338,760	$4,756,371	$135,183	$5,230,314
Hospice [b]	$2,686	$18,503	$604	$21,794	$83,315	$1,806,152	$10,428	$1,899,895
Home Health [b]	$11,645	$49,244	$4,115	$65,004	$287,251	$2,614,439	$61,888	$2,963,578
Total Part A	$168,072	$505,643	$116,641	$790,355	$3,898,689	$26,577,648	$1,233,225	$31,709,562

[a] Non-acute hospitals include long-term care, psychiatric, rehabilitation, and children's hospitals.

[b] Hospice and HH only have Medicare payment

Table 7.5.b. Average payments for Part A services by eligibility type for IHS AIAN and non-Hispanic white Medicare enrollees who lived in an IHS Area. 2010.

Services	IHS AIAN				Non-Hispanic white			
	Disabled	Aged	ESRD	All persons	Disabled	Aged	ESRD	All persons
Acute Inpatient	$3,676	$3,972	$22,436	$4,527	$3,009	$3,132	$23,217	$3,250
Non-acute hospitals [a]	$650	$432	$2,335	$557	$682	$340	$2,445	$404
All hospitals	$4,325	$4,405	$24,771	$5,084	$3,691	$3,472	$25,662	$3,654
Skilled Nursing Facility	$326	$803	$2,017	$715	$392	$949	$3,382	$884
Hospice [b]	$81	$220	$145	$180	$96	$360	$261	$321
Home Health [b]	$352	$586	$985	$536	$332	$522	$1,548	$501
Total Part A	$5,085	$6,013	$27,918	$6,514	$4,512	$5,304	$30,854	$5,361

[a] Non-acute hospitals include long-term care, psychiatric, rehabilitation, and children's hospitals.

[b] Hospice and HH only have Medicare payment

Table 7.6.a. Total payments for Part B services by eligibility type for IHS AIAN and non-Hispanic white Medicare enrollees who lived in an IHS Area. 2010.

Services	IHS AIAN				Non-Hispanic white			
	Disabled	Aged	ESRD	All persons	Disabled	Aged	ESRD	All persons
	Dollars (000s)	Dollars (000s)	Dollars (000s)	Dollars (000s)	Dollars (000s)	Dollars (000s)	Dollars (000s)	Dollars (000s)
Physician, physician assistant, and nurse practitioner office/clinic visit [a]	$12,731	$33,487	$2,055	$48,273	$409,885	$2,889,131	$30,523	$3,329,540
Other physician, physician assistant, and nurse practitioner visit [b]	$15,939	$36,466	$9,395	$61,799	$483,446	$2,493,796	$113,195	$3,090,437
Hospital outpatient [c]	$79,855	$191,572	$127,103	$398,530	$1,502,431	$7,297,413	$1,081,445	$9,881,290
Ambulatory surgery [d]	$1,868	$7,904	$514	$10,286	$56,316	$598,272	$4,390	$658,978
Laboratory	$5,438	$11,971	$4,949	$22,358	$213,812	$1,378,519	$49,670	$1,642,002
Imaging	$5,430	$15,037	$2,060	$22,527	$185,376	$1,395,742	$22,369	$1,603,487
Durable Medical Equipment	$13,924	$22,450	$5,191	$41,565	$374,188	$1,311,083	$40,320	$1,725,591
Dialysis	$240	$298	$10,211	$10,750	$1,680	$4,337	$87,429	$93,446
Other [e]	$35,138	$94,594	$19,554	$149,286	$1,016,143	$6,980,066	$235,037	$8,231,246
Total Part B	$170,563	$413,779	$181,032	$765,373	$4,243,278	$24,348,359	$1,664,380	$30,256,017

[a] Payments for typical office/clinic visits for evaluation and management; they include those conducted by other medical personnel (e.g., nurse midwife) who provide similar services. Evaluation and management services include those conducted by primary care and specialty providers, although payments for other specialist services (e.g., specific procedures) are counted elsewhere. Among I/T providers many of these visits are provided in hospital outpatient clinics rather than offices located elsewhere.

[b] Payments for other physician, physician assistant, nurse practitioner visits include those conducted in the emergency department, an inpatient setting, and at home, and visits conducted for specialty care (e.g., procedures) that were not classified as evaluation and management. They include those conducted by other medical personnel (e.g., nurse midwife) who provide similar services.

[c] Payments for hospital outpatient visits are those for non-professional and procedures, not counted elsewhere, for services provided in hospital outpatient clinics, including the emergency department. Among I/T providers, many physician, physician assistant, and nurse practitioner outpatient visits are conducted in hospital outpatient clinics.

[d] Ambulatory surgery counts are the number of unique ambulatory surgery procedures.

[e] Other payments are payments for Part B drugs, anesthesia, other procedures, and other types of covered services. Other procedures include a wide array of cardiovascular, orthopedic, gastrointestinal, and optometric, and other procedures. Other covered services include, but are not limited to, ambulance, chiropractor, chemotherapy, vision, and hearing and speech services.

Table 7.6.b. Average payments for Part B services by eligibility type for all IHS AIAN and non-Hispanic white Medicare enrollees who lived in an IHS Area. 2010.

Services	IHS AIAN				Non-Hispanic white			
	Disabled	Aged	ESRD	All persons	Disabled	Aged	ESRD	All persons
Physician, physician assistant, and nurse practitioner office/clinic visit [a]	$385	$398	$492	$398	$474	$577	$764	$563
Other physician, physician assistant, and nurse practitioner visit [b]	$482	$434	$2,249	$509	$560	$498	$2,832	$522
Hospital outpatient [c]	$2,416	$2,278	$30,422	$3,285	$1,739	$1,456	$27,056	$1,671
Ambulatory surgery [d]	$57	$94	$123	$85	$65	$119	$110	$111
Laboratory	$165	$142	$1,184	$184	$247	$275	$1,243	$278
Imaging	$164	$179	$493	$186	$215	$279	$560	$271
Durable Medical Equipment	$421	$267	$1,243	$343	$433	$262	$1,009	$292
Dialysis	$7	$4	$2,444	$89	$2	$1	$2,187	$16
Other [e]	$1,063	$1,125	$4,680	$1,230	$1,176	$1,393	$5,880	$1,392
Total Part B	$5,160	$4,921	$43,330	$6,309	$4,911	$4,859	$41,641	$5,115

[a] Payments for typical office/clinic visits for evaluation and management; they include those conducted by other medical personnel (e.g., nurse midwife) who provide similar services. Evaluation and management services include those conducted by primary care and specialty providers, although payments for other specialist services (e.g., specific procedures) are counted elsewhere. Among I/T providers many of these visits are provided in hospital outpatient clinics rather than offices located elsewhere.

[b] Payments for other physician, physician assistant, nurse practitioner visits include those conducted in the emergency department, an inpatient setting, and at home, and visits conducted for specialty care (e.g., procedures) that were not classified as evaluation and management. They include those conducted by other medical personnel (e.g., nurse midwife) who provide similar services.

[c] Payments for hospital outpatient visits are those for non-professional and procedures, not counted elsewhere, for services provided in hospital outpatient clinics, including the emergency department. Among I/T providers, many physician, physician assistant, and nurse practitioner outpatient visits are conducted in hospital outpatient clinics.

[d] Ambulatory surgery counts are the number of unique ambulatory surgery procedures.

[e] Other payments are payments for Part B drugs, anesthesia, other procedures, and other types of covered services. Other procedures include a wide array of cardiovascular, orthopedic, gastrointestinal, and optometric, and other procedures. Other covered services include, but are not limited to, ambulance, chiropractor, chemotherapy, vision, and hearing and speech services.

8. Information on Medicare Enrollees with High Costs or High Utilization

High cost/use patients include patients who had their Total payment in the top 1% of IHS AIAN payments in their eligibility category and patients who had high use of specific types of inpatient or outpatient services.[m] In this section, we provide information to describe high cost/use patients, as well as information on their inpatient and outpatient utilization and Total payments.

Table 8.1 includes information on the average age, Medicaid enrollment status, health status, mortality, and average Total payment for high cost/use patients. In comparison to the reference group, IHS AIAN high cost/use patients were younger and had a higher rate of Medicaid coverage. IHS AIAN also had higher prevalence of diabetes and cardiovascular disease, and a higher percentage of IHS AIAN high cost/use patients died in 2010 despite being younger than the reference population.

Tables 8.2-8.4 provide information on utilization and payments for high cost/use patients. According to the findings for inpatient services in Table 8.2, IHS AIAN high cost/use patients spent over 45 days, on average, in the hospital. Over 40% of their acute short-stay hospital admissions were readmissions. Their inpatient service utilization was higher than that for non-Hispanic white high cost/use patients. IHS AIAN high cost/use patients had, on average, one SNF admission during the year and spent 27.7 days utilizing such services. Their SNF utilization was lower than that of non-Hispanic white high cost/use patients, who averaged 35.7 days of service use.

Table 8.3 provides information on outpatient service use. IHS AIAN had, on average, more than three emergency department visits during the year. IHS AIAN had higher utilization of emergency department services than non-Hispanic white high cost/use patients. IHS AIAN high cost/use patients had somewhat lower utilization of hospice services than non-Hispanic white high cost/use patients (5.6 days and 6.3 days per person, respectively).

As expected, average Total payments per high cost/use patient were high. See Table 8.4. Among IHS AIAN high cost/use patients, the average was more than $160,000 per patient. Over 70% of Total payments for the IHS AIAN high cost/use patients were for Part A covered services, a higher percentage than that for the reference population.

[m] Based on a review of utilization and payment data, enrollees identified as having *high use* had 15 or more admissions, 80 or more acute inpatient days, 80 or more other inpatient days, 100 or more of any inpatient days, 30 or more outpatient emergency department visits, 30 or more ambulatory surgery events, or 70 or more physician office visits.

Table 8.1. Characteristics of IHS AIAN and non-Hispanic white Medicare high cost/use enrollees who lived in an IHS Area.[a] 2010.

Eligibility	IHS AIAN			Non-Hispanic white		
	High cost/use	Non-high cost/use	All persons	High cost/use	Non-high cost/use	All persons
Disabled						
Number	387	32,668	33,055	9,442	854,554	863,996
Percent (row)	1.2%	98.8%	100.0%	1.1%	98.9%	100.0%
Mean age	49.0	50.0	50.0	51.0	51.0	51.0
Percent with 12 months Medicaid coverage	37.2%	34.1%	34.2%	39.1%	32.5%	32.6%
Percent with diabetes or CVD	77.3%	39.3%	39.7%	71.0%	32.1%	32.5%
Percent who died in 2010	16.0%	2.1%	2.2%	13.2%	2.1%	2.2%
Aged						
Number	872	83,218	84,090	41,873	4,969,280	5,011,153
Percent (row)	1.0%	99.0%	100.0%	0.8%	99.2%	100.0%
Mean age	75.0	75.0	75.0	77.0	76.0	76.0
Percent with 12 months Medicaid coverage	28.1%	22.0%	22.1%	14.4%	7.4%	7.4%
Percent with diabetes or CVD	92.0%	56.8%	57.2%	89.7%	49.4%	49.7%
Percent who died in 2010	29.6%	4.6%	4.9%	25.7%	4.8%	4.9%
ESRD						
Number	63	4,115	4,178	873	39,097	39,970
Percent (row)	1.5%	98.5%	100.0%	2.2%	97.8%	100.0%
Mean age	49.0	50.0	50.0	63.0	66.0	66.0
Percent with 12 months Medicaid coverage	25.4%	27.3%	27.2%	22.1%	16.0%	16.2%
Percent with diabetes or CVD	100.0%	92.2%	92.3%	97.1%	85.4%	85.6%
Percent who died in 2010	41.3%	13.4%	13.8%	31.4%	18.6%	18.9%
All persons						
Number	1,322	120,001	121,323	52,188	5,862,931	5,915,119
Percent (row)	1.1%	98.9%	100.0%	0.9%	99.1%	100.0%
Mean age	66.0	67.0	67.0	72.0	73.0	73.0
Percent with 12 months Medicaid coverage	30.6%	25.5%	25.5%	19.0%	11.1%	11.2%
Percent with diabetes or CVD	88.0%	53.3%	53.6%	86.4%	47.1%	47.4%
Percent who died in 2010	26.2%	4.2%	4.5%	23.5%	4.5%	4.6%

[a] The table includes data for enrollees with continuous FFS coverage.

Table 8.2. Inpatient service utilization for high cost/use IHS AIAN and non-Hispanic white Medicare patients who lived in an IHS Area. 2010.

	Average number of services per person							
	IHS AIAN				Non-Hispanic white			
	Disabled	Aged	ESRD	All persons	Disabled	Aged	ESRD	All persons
Acute short-stay hospitals								
Admissions	4.1	3.7	6.8	4.0	3.6	3.3	6.4	3.4
Days	30.4	28.9	62.5	30.9	27.4	26.4	62.1	27.2
Readmissions [a]	41.9%	39.1%	54.0%	41.2%	42.0%	36.2%	53.5%	37.9%
Non-acute hospitals [b]								
Admissions	0.7	0.6	0.9	0.6	1.0	0.5	0.8	0.6
Days	17.8	13.0	29.9	15.2	20.6	11.4	23.6	13.3
All hospitals								
Admissions	4.8	4.3	7.7	4.6	4.6	3.9	7.3	4.1
Days	48.3	41.9	92.4	46.2	48.0	37.8	85.7	40.5
Skilled nursing facilities								
Admissions	0.7	1.2	1.4	1.0	0.8	1.4	1.7	1.3
Days	17.1	32.0	34.0	27.7	21.0	39.1	37.8	35.8

[a] A readmission is defined as a new admission that occurred within 30 days of a previous admission's discharge date.

[b] Non-acute hospitals include long-term care, psychiatric, rehabilitation, and children's hospitals.

Table 8.3. Information on selected outpatient services for high cost/use IHS AIAN and non-Hispanic white Medicare enrollees who lived in an IHS area. 2010.

Service	IHS AIAN				Non-Hispanic white			
	Disabled	Aged	ESRD	All persons	Disabled	Aged	ESRD	All persons
	Average number per person	Average number per person	Average number per person	Average number per person	Average number per person	Average number per person	Average number per person	Average number per person
Emergency department visit [a]	6.9	2.1	5.4	3.6	7.1	1.6	4.1	2.7
Physician, physician assistant, and nurse practitioner office/clinic visit for evaluation and management [b]	16.3	12.6	9.2	13.5	16.1	17.6	11.7	17.2
Hospital outpatient visit [c]	41.9	27.0	116.7	35.7	33.9	24.4	115.2	27.6
Other physician, physician assistant, and nurse practitioner visit for evaluation and management [d]	82.2	69.5	194.3	79.1	89.7	78.9	203.6	83.0
Ambulatory surgery center procedure [e]	0.4	0.3	0.1	0.3	0.5	0.3	0.2	0.4
Prescribed medication [f]	71.8	52.6	54.6	58.3	84.3	45.9	58.7	53.0
Durable medical equipment [g]	16.9	9.9	14.9	12.2	12.7	10.2	13.8	10.7
Home health visit	20.8	23.9	17.3	22.7	21.9	32.2	31.5	30.4
Hospice								
Stay [h]	0.05	0.16	0.11	0.12	0.06	0.13	0.08	0.12
Service day	2.1	7.4	1.9	5.6	2.6	6.5	1.8	5.7

The majority of summary service categories listed in the table include only data for outpatient services. However, some of the summary service categories (such as hospice) include data for inpatient services, as described below.

[a] Emergency department visits are an emergency department visits that did not result in an admission.

[b] Office/clinic visits for evaluation and management are typical office visits and include those conducted by other medical personnel who provide similar services (for example, a nurse midwife). Evaluation and management services may be provided by primary care and specialty providers. Evaluation and management visits conducted in other settings (such as in a hospital or an emergency department) and visits conducted to obtain specific procedures are included in other service categories.

[c] Hospital outpatient visits include outpatient visits conducted by physicians, physician assistants, nurse practitioners, and other providers if the service was provided in an outpatient hospital clinic, a Federally Qualified Health Center, or a Rural Health Clinic.

[d] Other physician, physician assistant, nurse practitioner visits conducted for evaluation and management include those that took place in an hospital emergency department, an inpatient setting, and at home. They include those conducted by other medical personnel who provide similar services (for example, a nurse midwife).

[e] Ambulatory surgery center procedures are the number of unique ambulatory surgery procedures provided in an ambulatory surgery center.

[f] Prescribed medications are the number of dispensed prescribed medications covered by Part D.

[g] Durable medical equipment is the number of units of equipment, devices, and supplies.

[h] A hospice stay indicates a person obtained hospice services regardless of location (such as inpatient or at home).

Table 8.4. Average Total payments[a] for high cost/use IHS AIAN and non-Hispanic white Medicare enrollees who lived in an IHS Area. 2010.

Payment type	IHS AIAN				Non-Hispanic white			
	Disabled	Aged	ESRD	All persons	Disabled	Aged	ESRD	All persons
Part A								
Average payment	$107,536	$112,722	$214,913	$116,074	$101,991	$104,462	$210,480	$105,789
Percent (column)	64.5%	73.6%	71.6%	70.7%	60.8%	70.7%	68.8%	68.7%
Part B								
Average payment	$47,274	$35,679	$79,568	$41,165	$48,996	$38,106	$87,685	$40,905
Percent (column)	28.3%	23.3%	26.5%	25.1%	29.2%	25.8%	28.7%	26.6%
Part D								
Average payment	$11,965	$4,833	$5,787	$6,966	$16,808	$5,107	$7,702	$7,267
Percent (column)	7.2%	3.2%	1.9%	4.2%	10.0%	3.5%	2.5%	4.7%
Total								
Average payment	$166,775	$153,234	$300,268	$164,205	$167,795	$147,675	$305,866	$153,961
Percent (column)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

[a] Total payments include Medicare payments and other payments. Other payments include cost-sharing for deductibles and co-insurance for provided services, and are made by Medicare enrollees and by other types of health coverage they may have (such as private coverage, Medicaid).

9. Health Service Utilization and Payments for Enrollees with Diabetes

IHS AIAN with diabetes had higher use of hospital inpatient services than did non-Hispanic white enrollees with diabetes, despite being younger. See Table 9.1. IHS AIAN with diabetes spent, on average, 3.8 days in the hospital in 2010, and 21.2% of their acute short-stay hospital admissions were readmissions. Their use of inpatient hospital services, as measured by days, was 1.2 times higher than inpatient use by non-Hispanic white enrollees with diabetes who spent, on average, 3.1 days per person in the hospital.

IHS AIAN with diabetes had higher use of hospital emergency department services than did non-Hispanic white enrollees with diabetes. See Table 9.2. IHS AIAN with diabetes had, on average, 0.8 emergency department visits, a rate that was 1.3 times that of non-Hispanic white enrollees with diabetes. The findings concerning higher use of inpatient hospital and emergency department services by IHS AIAN with diabetes, compared to the non-Hispanic white enrollees with diabetes, were similar to those for all enrollees regardless of diabetes status.

IHS AIAN with diabetes had similar use of dispensed medications than non-Hispanic white enrollees with diabetes. The average number of dispensed prescribed medications covered by Part D was 40.8 among IHS AIAN with diabetes; the number among non-Hispanic white enrollees with diabetes was 41.4. Their use of DME, home health, and hospice services was, however, lower.

The average Total payment for IHS AIAN with diabetes was 1.5 times higher than the average Total payment for all IHS AIAN, regardless of diabetes status. See Table 9.3. The average Total payment for IHS AIAN with diabetes was $22,751 per person (see Table 9.3), while that for all IHS AIAN regardless of diabetes status was $15,201 per person (see Table 7.4).

The findings concerning differences between IHS AIAN and non-Hispanic white enrollees with diabetes in average Total payment were similar to those for all enrollees, regardless of diabetes status. The average Total payment for IHS AIAN with diabetes was 1.2 times higher than the average payment for non-Hispanic white enrollees with diabetes. The average Total payment for non-Hispanic white enrollees with diabetes was $19,502.

Table 9.1. Inpatient service utilization for IHS AIAN and non-Hispanic white Medicare patients with diabetes who lived in an IHS Area. 2010.

	Average number of services per person							
	IHS AIAN				Non-Hispanic white			
	Disabled	Aged	ESRD	All persons	Disabled	Aged	ESRD	All persons
Acute short-stay hospitals								
Admissions	0.6	0.5	1.7	0.6	0.6	0.5	1.9	0.5
Days	2.9	2.5	9.1	3.1	2.7	2.3	11.2	2.5
Readmissions [a]	21.3%	18.5%	27.7%	21.0%	21.2%	17.9%	30.4%	19.2%
Non-acute hospitals [b]								
Admissions	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0
Days	0.8	0.5	1.6	0.7	1.1	0.5	2.0	0.6
All hospitals								
Admissions	0.7	0.6	1.8	0.7	0.7	0.5	2.0	0.6
Days	3.7	3.0	10.7	3.8	3.8	2.8	13.2	3.1
Skilled nursing facilities								
Admissions	0.1	0.1	0.2	0.1	0.1	0.1	0.4	0.1
Days	1.4	2.5	5.3	2.5	1.9	3.3	9.2	3.2

[a] A readmission is defined as a new admission that occurred within 30 days of a previous admission's discharge date.

[b] Non-acute hospitals include long-term care, psychiatric, rehabilitation, and children's hospitals.

Table 9.2. Information on selected outpatient services for IHS AIAN and non-Hispanic white Medicare enrollees with diabetes who lived in an IHS area. 2010.

Service	IHS AIAN				Non-Hispanic white			
	Disabled	Aged	ESRD	All persons	Disabled	Aged	ESRD	All persons
	Average number per person	Average number per person	Average number per person	Average number per person	Average number per person	Average number per person	Average number per person	Average number per person
Emergency department visit [a]	1.2	0.6	1.4	0.8	1.2	0.5	1.4	0.6
Hospital outpatient visit [b]	8.2	7.5	7.8	7.7	9.4	9.5	10.3	9.5
Physician, physician assistant, and nurse practitioner office/clinic visit [c]	12.9	10.9	138.0	21.1	10.7	7.9	122.4	10.4
Other physician, physician assistant, and nurse practitioner visit [d]	8.9	7.0	25.2	8.8	11.4	8.6	34.6	9.4
Ambulatory surgery [e]	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3
Prescribed Medications [f]	56.4	35.4	45.1	40.8	67.6	37.1	51.6	41.4
Durable Medical Equipment	5.8	3.8	6.7	4.5	8.8	5.9	9.6	6.4
Home Health visit	4.7	6.3	7.5	6.0	5.6	6.7	14.0	6.7
Hospice								
Stays [g]	0.01	0.02	0.03	0.02	0.01	0.03	0.07	0.03
Covered Days	0.8	1.6	0.9	1.4	0.7	2.4	1.5	2.2

The majority of summary service categories listed in the table include only data for outpatient services. However, some of the summary service categories (such as hospice) include data for inpatient services, as described below.

[a] Emergency department visits are an emergency department visits that did not result in an admission.

[b] Office/clinic visits for evaluation and management are typical office visits and include those conducted by other medical personnel who provide similar services (for example, a nurse midwife). Evaluation and management services may be provided by primary care and specialty providers. Evaluation and management visits conducted in other settings (such as in a hospital or an emergency department) and visits conducted to obtain specific procedures are included in other service categories.

[c] Hospital outpatient visits include outpatient visits conducted by physicians, physician assistants, nurse practitioners, and other providers if the service was provided in an outpatient hospital clinic, a Federally Qualified Health Center, or a Rural Health Clinic.

[d] Other physician, physician assistant, nurse practitioner visits conducted for evaluation and management include those that took place in an hospital emergency department, an inpatient setting, and at home. They include those conducted by other medical personnel who provide similar services (for example, a nurse midwife).

[e] Ambulatory surgery center procedures are the number of unique ambulatory surgery procedures provided in an ambulatory surgery center.

[f] Prescribed medications are the number of dispensed prescribed medications covered by Part D.

[g] Durable medical equipment is the number of units of equipment, devices, and supplies.

[h] A hospice stay indicates a person obtained hospice services regardless of location (such as inpatient or at home).

Table 9.3. Average Total payments[a] for IHS AIAN and non-Hispanic white enrollees with diabetes who lived in an IHS Area. 2010.

Payment type	IHS AIAN				Non-Hispanic white			
	Disabled	Aged	ESRD	All persons	Disabled	Aged	ESRD	All persons
Part A								
Average payment	$8,668	$8,479	$29,718	$10,157	$8,877	$8,609	$36,307	$9,149
Percent (column)	40.9%	49.7%	37.6%	44.6%	37.8%	49.4%	41.8%	46.9%
Part B								
Average payment	$7,550	$6,389	$44,491	$9,581	$7,786	$6,658	$45,143	$7,509
Percent (column)	35.6%	37.5%	56.3%	42.1%	33.2%	38.2%	52.0%	38.5%
Part D								
Average payment	$4,997	$2,182	$4,850	$3,013	$6,813	$2,167	$5,400	$2,844
Percent (column)	23.6%	12.8%	6.1%	13.2%	29.0%	12.4%	6.2%	14.6%
Total								
Average payment	$21,215	$17,050	$79,059	$22,751	$23,476	$17,434	$86,851	$19,502
Percent (column)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

[a] Total payments include Medicare payments and other payments. Other payments include cost-sharing for deductibles and co-insurance for provided services, and are made by Medicare enrollees and by other types of health coverage they may have (such as private coverage, Medicaid).

IV. CONCLUSIONS AND RECOMMENDATIONS

The primary goal of the AIAN Data Project is to provide information that may be used by the TTAG, CMS, IHS and other organizations to inform their work, and ultimately to improve AIAN health status and use of resources. Previous Data Project Medicare reports provided valuable information for AIAN Medicare enrollees on demographic characteristics, Medicare Part B coverage, enrollment in Medicaid, and inpatient utilization and payments for acute short-stay hospital admissions. Due to the existence of the CMS Chronic Condition Warehouse, it is now more possible to report on AIAN Medicare Part D coverage, inpatient and outpatient service utilization for a broad array of services, payments for all covered services, and health status. These CMS data also make it possible to provide similar information for a reference population living in similar geographic areas, in order to provide context for the reported findings.

As this is the first report to be written using the *2010 Medicare Beneficiary Summary File* from the Chronic Condition Warehouse, it provides an overview of many Medicare-related topics. Although these general findings are based on summary utilization and payment data and do not include statistical analyses, we highlight a number of key findings below. For each, detailed statistical analyses may be conducted using the Medicare summary data and service-specific data to more fully understand factors that influence the findings. For example, differences in payments between IHS AIAN and non-Hispanic white enrollees may be explained in part by differences in age, health status, Medicaid enrollment, Medicare Part D coverage, geographic location (e.g., rural location), and geographic variations in utilization and Medicare payments.

Nearly 30% of IHS AIAN enrollees had Medicare coverage due to disability or ESRD, double the percentage among non-Hispanic white enrollees. Among IHS AIAN enrollees, 26.6% were Disabled and 3.1% had ESRD eligibility. Among non-Hispanic white enrollees, 14.2% were Disabled and 0.3% had ESRD eligibility. Within each of these eligibility categories, the average age of the AIAN enrollees was younger than the average for non-Hispanic white enrollees.

- Additional data analyses could be conducted to improve understanding of the prevalence of chronic conditions among and health service utilization of AIAN enrollees who are Disabled or have ESRD.

Twice as many IHS AIAN Medicare enrollees (21.6%) as non-Hispanic white enrollees (9.9%) were dually enrolled in Medicaid. It is important to consider the availability of household resources and education when assessing AIAN health service utilization and related payments. According to U.S. Census data, AIAN are more likely to have lower income and educational attainment than white persons.[2,3] Limited household resources influence utilization through a number of pathways, including stress, transportation, ability to leave work for medical appointments, and availability of non-medical items (such as food, housing, and telephones) that facilitate health and service use. For those with limited financial resources, household income influences ability to pay out-of-pocket costs.

Medicaid enrollment addresses some of these issues by providing coverage for Part B and Part D services, as well as for a wider array of services than is covered by Medicare (such as transportation and long-term care services). In states planning to implement Medicaid expansion programs under the provisions of the Affordable Care Act,[4] Medicaid enrollment by IHS AIAN will increase.

- Additional analyses of Medicaid and Medicare data for dually enrolled IHS AIAN could provide more specific information on their chronic conditions and healthcare utilization. For example, analysis of ambulatory sensitive hospitalizations[n] could reveal areas for improvement of access to effective primary care services. Analysis of the prevalence of chronic conditions among and healthcare use of the dually enrolled with Medicaid long-term care coverage could also reveal opportunities to better integrate the delivery of services.

The prevalence of diabetes among IHS AIAN was 1.6 times as high as that for non-Hispanic white enrollees, despite the fact that IHS AIAN were younger. The prevalence was 38.9% and 23.8%, respectively, among IHS AIAN and non-Hispanic white enrollees. A higher prevalence among IHS AIAN was

[n] Ambulatory sensitive hospitalizations are hospital stays that may be prevented with increased access to and use of outpatient services.

observed across all age groups—from those who were less than 45 years old to those who were over 75 years old. Persons with diabetes are at risk for cardiovascular disease and ESRD, as well as higher health service utilization and Medicare payments.

- Additional analyses could inform efforts to prevent the onset of complications among those with diabetes and efforts aimed at preventing the condition. For example, more detailed data may be analyzed to understand use of primary, specialty, and educational services that may improve health status and limit preventable use on hospital inpatient services among those with diabetes.

IHS AIAN utilization rates for hospital emergency department and inpatient services were 1.4 times as high as utilization by non-Hispanic white enrollees. IHS AIAN spent, on average, 2.4 days in the hospital and averaged 0.6 emergency department visits during 2010. Non-Hispanic white enrollees averaged 1.8 days in the hospital and 0.4 emergency department visits during the year. These trends were observed across all three eligibility types (that is Aged, Disabled, ESRD). In addition, the hospital readmission rate was higher among IHS AIAN.

- Analyses of detailed data for hospital admissions could improve understanding of factors associated with health service use during and after a hospital stay, and the extent to which hospital admissions and readmissions could be prevented with access to and use of outpatient services.

Nearly 40% of IHS AIAN with continuous FFS coverage[o] also had 12 months of Part D coverage. Medicare payments for their prescribed medications accounted for two-thirds of Total medication payments. The remaining one-third was paid for by other sources, including the enrollees. Medicare cost-sharing for Part B and Part D covered services, or lack of Part B and D coverage, may create barriers to obtaining Part B and D covered services for enrollees with limited incomes and no other forms of healthcare coverage (such as Medicaid and private supplemental coverage). At the same time, some tribes are purchasing Medicare and other types of coverage for their members.

- Detailed analyses of prevalence of chronic conditions and service utilization could provide tribes information that may inform decisions related to purchasing healthcare coverage.

As with other populations, a small number of IHS AIAN Medicare enrollees were identified as having very high total payments or service use. For the purposes of this report, we identified high cost/use patients as persons for whom Total payments were in the top 1% of IHS AIAN payments in their eligibility category, or who had high use of specific types of inpatient or outpatient services. In comparison to non-Hispanic white high cost/use patients, IHS AIAN high cost/use patients were younger, had a higher rate of Medicaid coverage, and had a higher prevalence of diabetes and cardiovascular disease. In addition, a larger percentage of the IHS AIAN high cost/use patients died during 2010.

- Analyses could be conducted to more fully understand the needs of high cost/use patients and identify opportunities to see that timely and appropriate services are available to meet their needs. For example, analyses of home health service utilization data could provide information that may be used to improve the availability and use of such services.

The average Total payment for IHS AIAN in all eligibility categories was $15,021 per person, approximately 1.2 times higher than that for non-Hispanic white enrollees ($12,261)—a difference of approximately $2,700. Although this report does not include detailed statistical analyses, it is possible to comment on a few factors that contribute to the observed differences in payments between IHS AIAN and non-Hispanic white enrollees based on the summary data analyzed here.

One factor that contributes to higher Medicare payments is differences in Medicare eligibility. As noted above, a larger percentage of IHS AIAN were Disabled or had ESRD, compared to non-Hispanic white enrollees. In both populations, average Total payment for enrollees who were Disabled or who had ESRD were higher than the average for enrollees who were Aged. Consequently, the higher average Total payments for those who were Disabled or had ESRD had a greater influence on the average payment for all IHS AIAN than for non-Hispanic white enrollees. Second, IHS AIAN were more likely to have diabetes than non-Hispanic white

[o] Enrollees with continuous FFS coverage were enrollees with 12 months of both Part A and Part B coverage, and enrollees who had both types of coverage for each month they were alive.

enrollees. The average Total payment for IHS AIAN with diabetes was 50% higher than that for all IHS AIAN, regardless of diabetes status.

Third, some of the observed payment differences are due to utilization differences. IHS AIAN had higher use of emergency department, hospital inpatient services, and hospital outpatient services. Total payments for these services were much higher among IHS AIAN than among non-Hispanic white enrollees (more than $1,400 higher for hospital inpatient services and $1,600 higher for hospital outpatient services), and accounted for a larger percentage of their Total payments. Differences in Medicare reimbursement methods may also contribute to some of the observed payment differences. Furthermore, other IHS AIAN characteristics, such as lower socioeconomic status,[2,3] rural residence, and reduced access to healthcare providers, influence health service costs and may contribute to the observed differences.

There are a number of limitations that must be considered when interpreting the reported findings. Three merit attention. While it would not have been possible to provide this overview of the status of IHS AIAN Medicare enrollees without access to the Medicare summary data, it is important to conduct analyses using service-specific data to more fully understand utilization of primary and specialty care outpatient services. It was not possible to interpret findings for some outpatient services (for example, physician, physician assistant, and nurse practitioner office/clinic visits) using the summary variables in the data. Second, the data do not include information on non-covered services (such as prescription drug use among persons without Part D coverage and home health services that exceed the Medicare allowable amount). Third, due to the early stage of this work, this report includes general findings without detailed statistical analyses. As noted above, additional analyses may be conducted using these and other Medicare data.

Despite these limitations, this report provides the most detailed description to date of healthcare coverage, health status, service utilization, and payments for AIAN enrolled in Medicare. The findings may inform the CMS Tribal Technical Advisory Group in its work to advise CMS on Medicare policy and program issues affecting AIAN. The results provide baseline rates for a number of healthcare and health status indicators and how they compare to rates of others living in the same counties. The report demonstrates that Medicare data can be used to monitor trends in these indicators over time as policies and programs change. Finally, the information will guide the development of future Tribal Technical Advisory Group Data Project analyses to improve understanding of many of the general findings presented in this report.

V. REFERENCES

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